JOANNIS KEPLERI

ASTRONOMI

OPERA OMNIA.

EDIDIT

Dr. CH. FRISCH.

VOLUMEN II.

FRANKOFURTI A. M. ET ERLANGAE.

HEYDER & ZIMMER.

MDCCCLIX.

JOANNIS KEPLERI

ASTRONOMI

OPERA OMNIA.

EDIDIT

Dr. CH. FRISCH.

VOLUMEN II.

[illegible] sunt a fine mensis Novembris 1857,

[illegible] mensem Majum 1859.

Max Kornicker.

6 Exempl.

A. Hayes.

Th. Vieten.

Königsberg:	Die Buchhandlung von W. Koch.
	„ „ „ Gräfe & Unzer.
Kopenhagen:	Die Gyldendal'sche Buchhandlung 4 Exempl.
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	Die Buchhandlung des K. Liederkranzes.
Tübingen:	„ Königl. [illegible] Fues'sche
	„ Realschule [illegible]
Turin:	„ Buchhandlung [illegible]
Warschau:	„ [illegible]
Wien:	Das K. K. [illegible]
	K. [illegible]
	[illegible]

ASTRONOMIAE

PARS OPTICA.

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esset, brevi intellecto, cum neque priores scriptores neque [illegible] fecerunt, rem ipsam aggressus nova jecit fundamenta, et [illegible] quae habemus parens evasit. Quae priores vagis vatibus, re non [illegible] sive prorsus falsa ponentes procederant, Keplerus rite conjunxit, [illegible] vit plurimosque errores abjecit. Qui restant errores et quae [illegible] sunt a Keplero, nemo ei crimini faciet, qui perpenderit, novam [illegible] dinam esse a Keplero scientiam et hic quoque virum doctissimum [illegible] xilibus fere omnibus, quae posterioribus suppeditabant experientia et [illegible] artibus ad penetralia rerum naturae, observationibus et perfectioribus [illegible] vendis instrumentis, pr[illegible] multa? [illegible] praebuit haec Kepleri Optica Newtono ad excelsiorem hanc scientiam [illegible] que et spectatoribus et adversariis, qui experientia et subtiliori [illegible] nitione, his limitibus fundamentis longius progressi sunt et praeclara [illegible] adinvenerunt.

[illegible]

meas [illegible]turales [illegible]

[illegible]

[illegible] meam, namque [illegible]

[illegible]nanter [illegible]

[illegible] et [illegible]

[illegible] luminaris [illegible]

[illegible]

[illegible] redit, interdum [illegible]

[illegible]alitatem [illegible]

Quod [illegible] instrumentum hoc a [illegible]

[illegible] incipientibus [illegible]

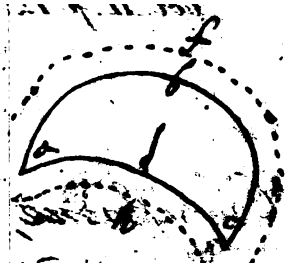
[illegible] transeuntes [illegible]

[illegible] Tychonis [illegible]

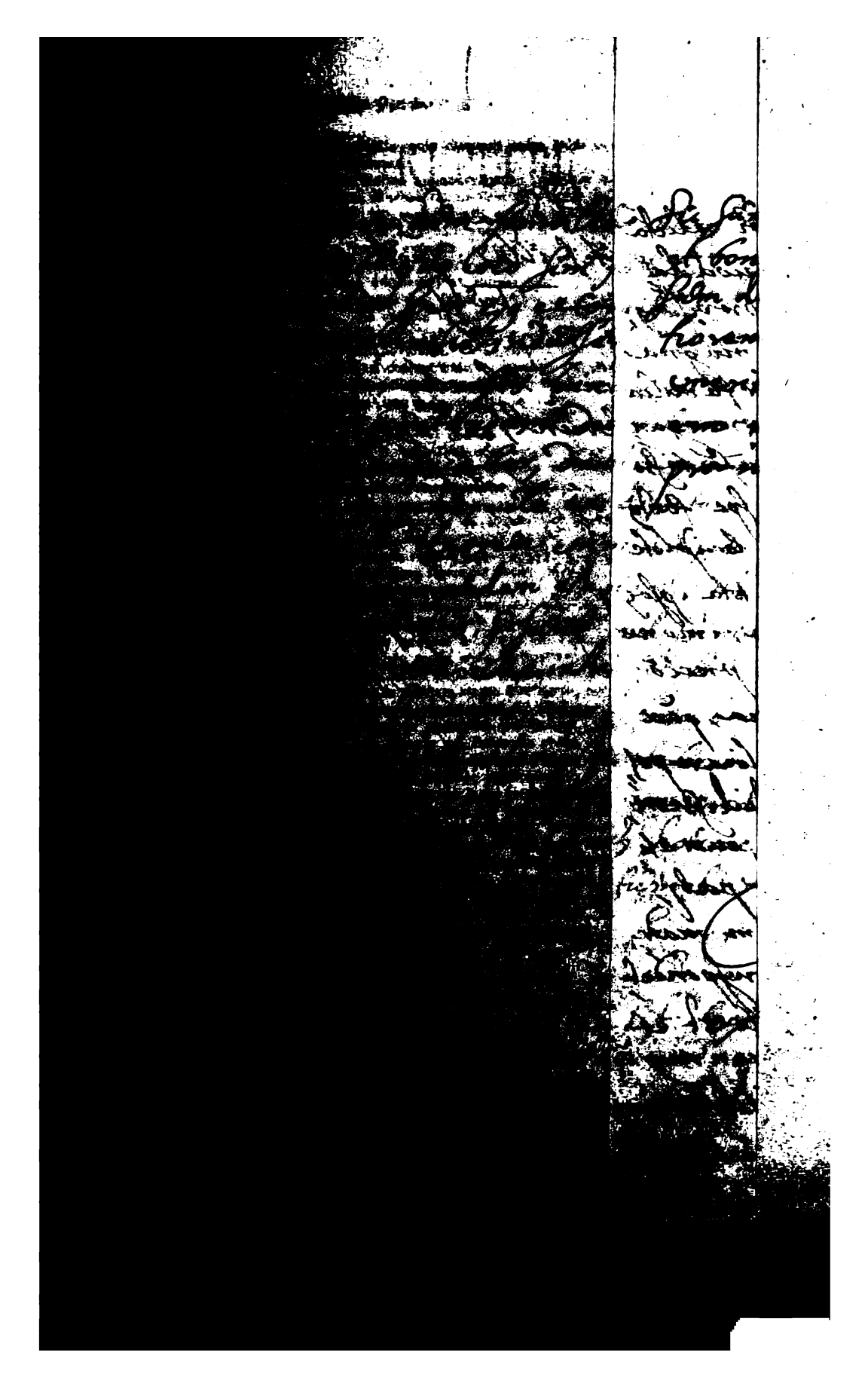
[illegible] posse [illegible]

[illegible], qui hic [illegible]

[illegible]



[illegible] puta a b c d. Sed qa forame[illegible]
[illegible] diameter ad diffractum[illegible]
[illegible] ampliatur lux per quam debet fe[illegible]
[illegible] angulo. [illegible]



et ἐκθεῶν ἀδωρεὰ δῶρα, et q amat patriam
a, amittet illa: quod mihi fas sit in hudm
etorquere. Tu si me de rebus aliquis
reddere vis Lincium mitte literas ad
tum Rectorem Memhardum. Inde in Boh
mihi poterunt, aut uxori mea tradi. Vale
vobis ora. 9 Septemb: ao 1600.

H. T. Grahftg discipulg

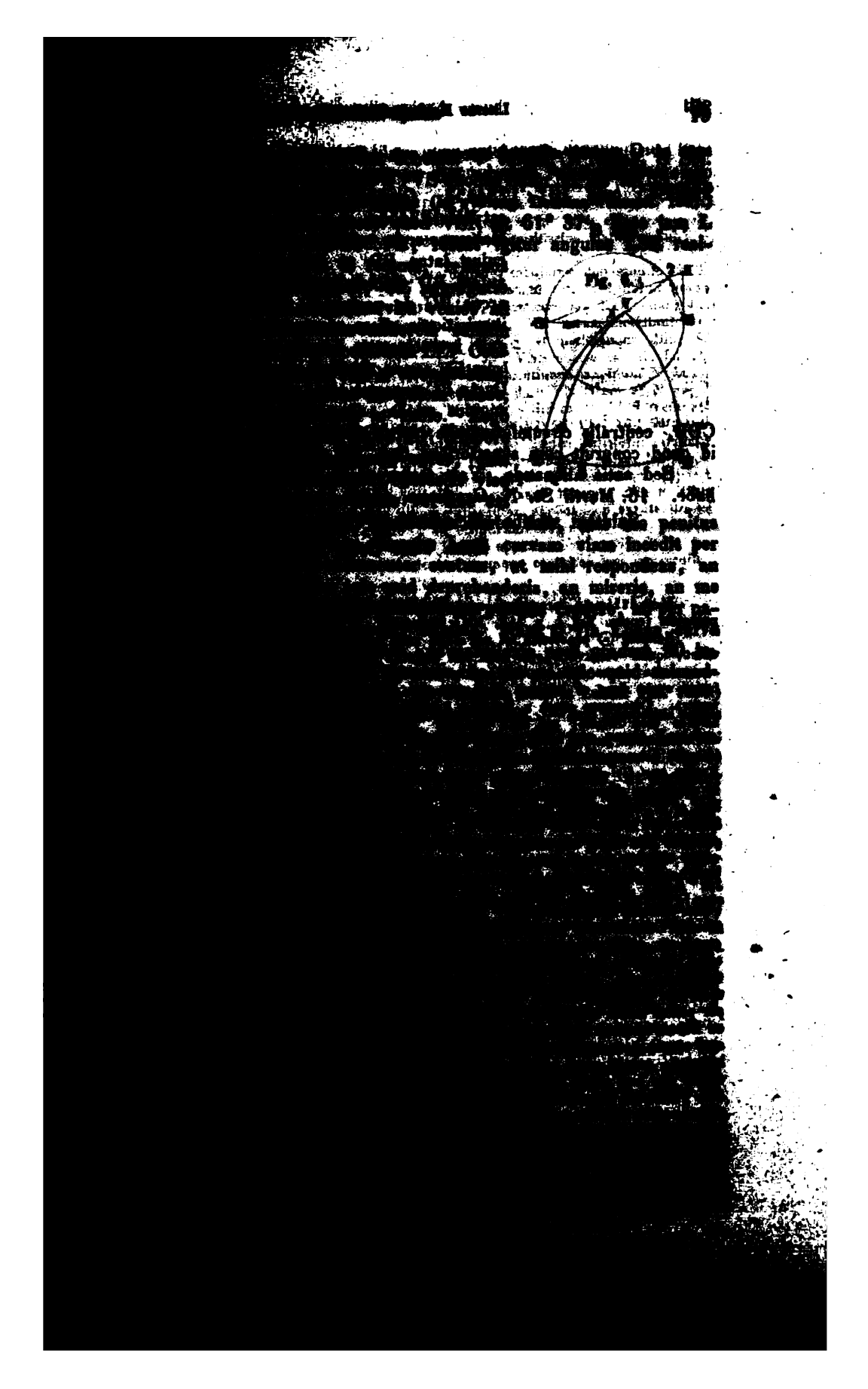
M Jo: Kepler

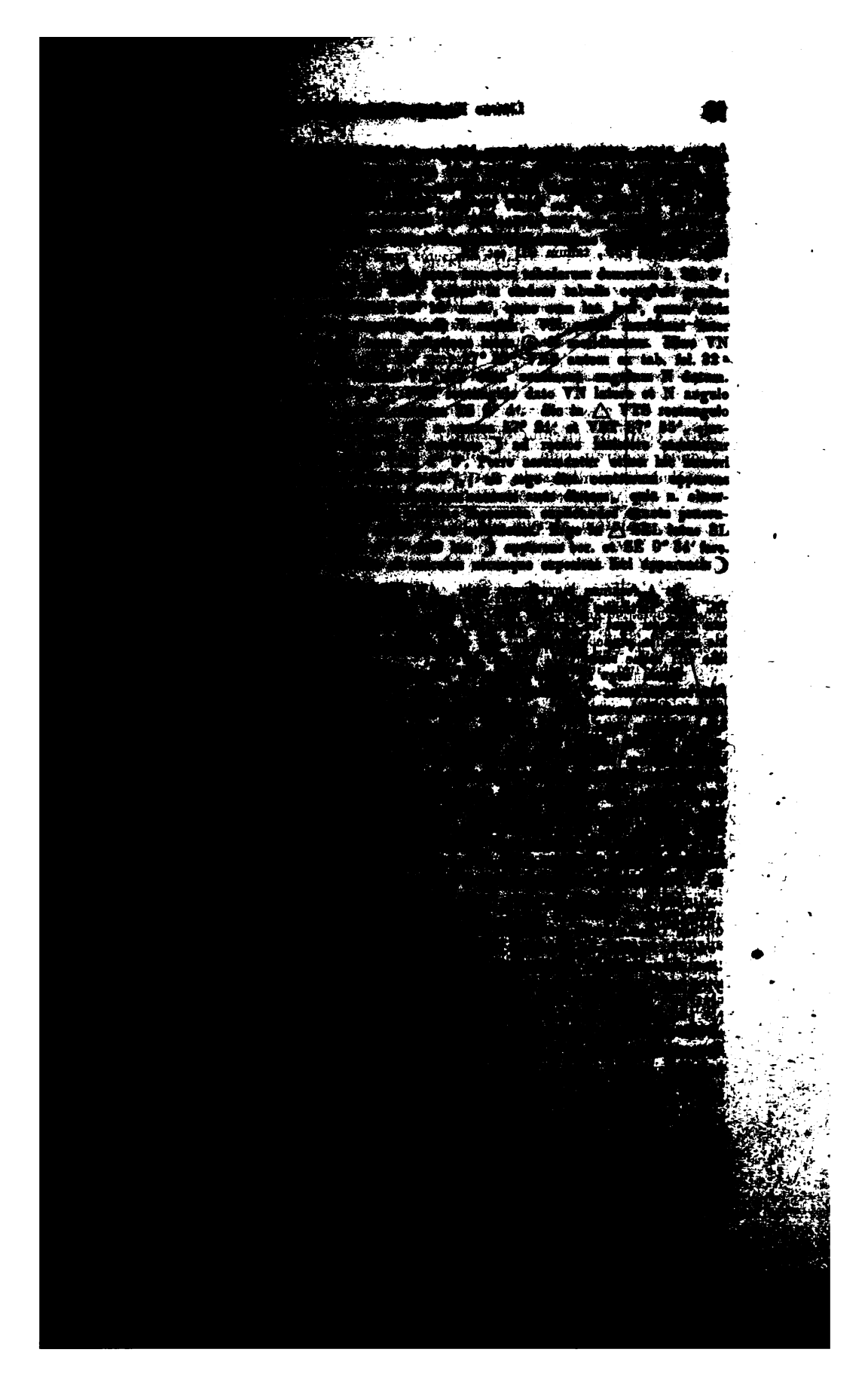
Reverendo viro D. M.
Michaeli Mastlino, Ma
theseos in Academia tubingen
Professori, Domino et Praeceptori meo colendissimo.

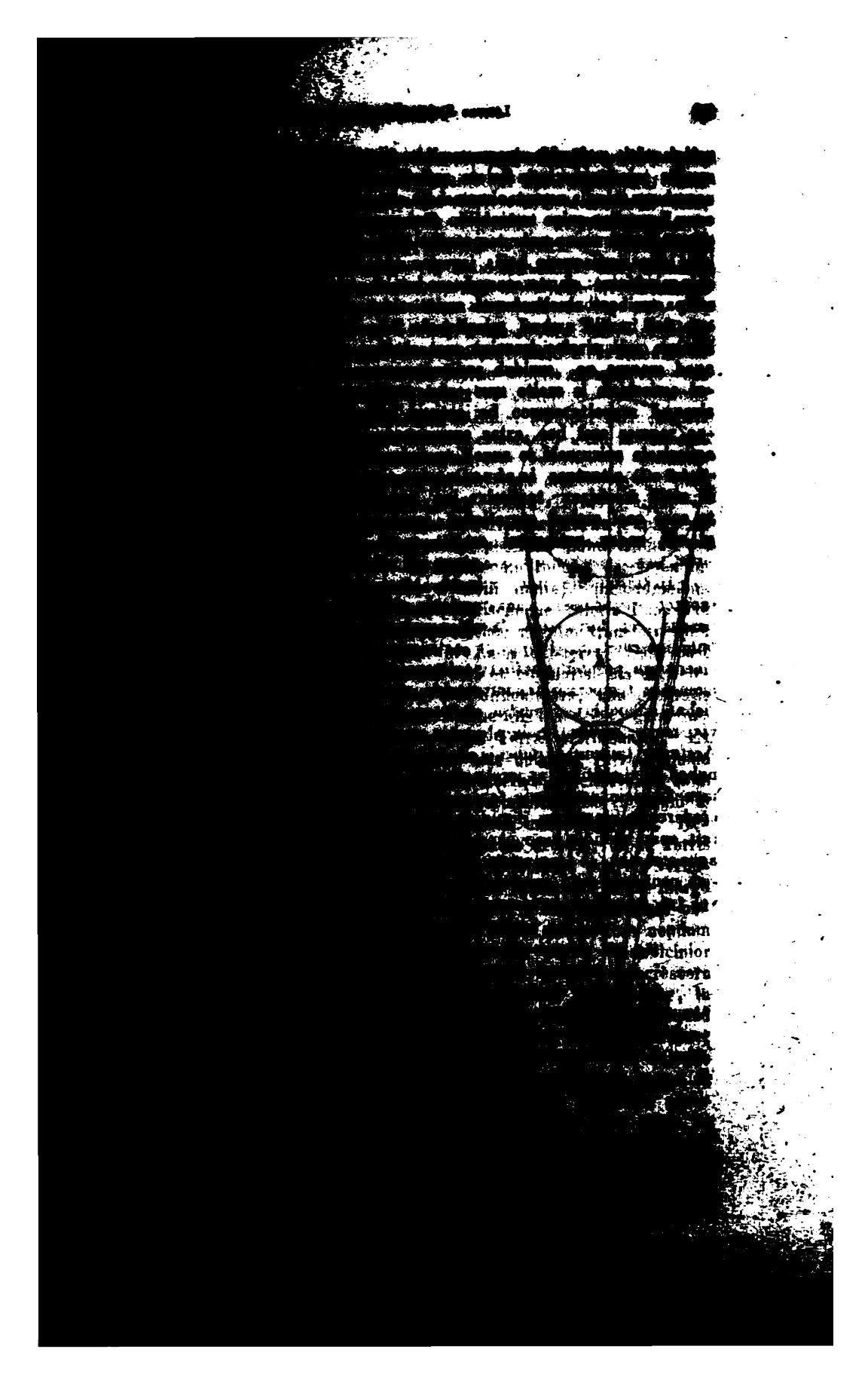
Tübing.

[illegible]

papyro inclinato [illegible]
[illegible] circumferentiae [illegible]







[illegible]

[illegible] Eclipsis [illegible] Anno 1568 [illegible]

[illegible] Cap. VII. [illegible] Cap. XI. [illegible]

[illegible]

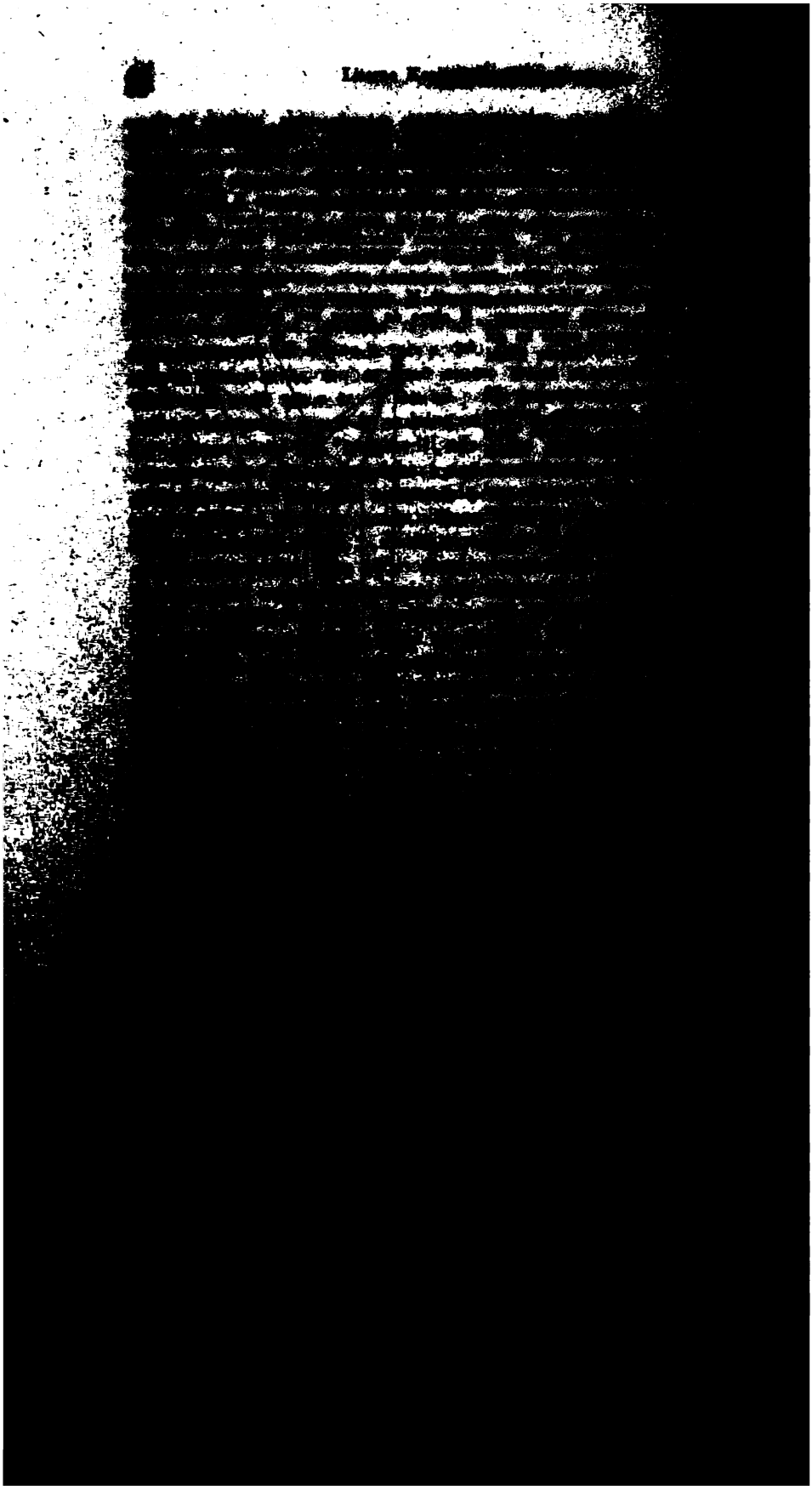
Eventus. Vide fuit eclipsis Lunae. Causa [illegible]

[illegible] Hispania, ubi luna [illegible] in horizonte [illegible] umbrae a quibus terrae partibus [illegible] horizontem spectantes, [illegible] aut Hispaniarum antipodibus [illegible] terrarum antipodes, quantum sine [illegible] Magellanicum fretum, Moluccas [illegible]. Jam vero cornu parumper flexit ad laevam, ita ut [illegible] magis minus ego fuissem, eorum quorum [illegible] tropico Cancri opposita tropico Capricorni [illegible] gradus 200 vel 210. Talis [illegible] partem, qua luna erguit. Ex hac [illegible] Terrae partes, cum religuis [illegible] Europaeis [illegible] ad laevam [illegible] luna, quae [illegible] [illegible] tropico Cancri [illegible]

△ DBC [illegible] id circumferentiam. Quapropter BA eique [illegible] [illegible] 100000 [illegible] ipsius DC 92[illegible] qui [illegible] ex FB relinquit DB, [illegible] quinquagesimam videlicet partem ipsius DC. [illegible] in △ FDE [illegible] 100000 [illegible] ad angulum FDE [illegible] angulum DFE 9° 50′ 26″. [illegible] anguli DFE 9° 50′ 20″ [illegible] problematis ista [illegible] ABC superficies [illegible] DC, DE radii [illegible] conciliari possint [illegible] hoc quidem [illegible] expediri [illegible]

[illegible] ut BC ad CA, sic densitas occursus radii [illegible] qui. Hae igitur lineae AC videntur [illegible] quoniam quasi mensura [illegible] elementi proportionalis [illegible] debet alterum elementum, quantitas [illegible] hae lineae BC, CA metirentur refractiones, [illegible] inventione sin [illegible] linea [illegible] inclinationum, tunc de BC [illegible] quae in vertice statuit refractio[illegible] ratione metiendi refractiones [illegible] quaeritur alia? [illegible] causam [illegible] horizonti vicinis obvenire [illegible] ubi [illegible] tuliunt, quod [illegible] Ideo in opticis hoc sum complexus, [illegible] inclinationes radiorum in [illegible] hoc pacto mediocriter exprimi refractiones [illegible] differentiam. [illegible]

[illegible]



Velim moneas et alios notes de Solis eclipsi observanda, si forte non prius legant meum librum.

Brenggerus: Quae de natura Lunaris corporis scripsisti (cap. VI, 2. 9), valde mihi arrident et parum abest quin cedam in tuam sententiam; neque id displicet quod ais, illam quodammodo a Terra nostra illustrari (ib. 10.) — Verum, quam eximia et ingeniosa est umbrae Terrae perscrutatio! (cap. VII.) — Cum inciderem in figuram illam (ib. 5), visus sum mihi jam non amplius in Terra, sed in ipso aethere versari et ista coram adspicere; praeclarum certe hoc est et summa laude dignum inventum, cujus ope video nonnullas quaestiones, quae misere me torquebant antea, commodissime posse solvi.

Gratum mihi fecisti, quod de loco stellae novae certiorem me fecisti: dabitur propediem occasio rursus eam observandi. Ortum ejus seu originem refero in diem 4. Oct., quo Jupiter et Mars in eodem gradu ubi nunc stella haeret juncti fuerunt juxta Leovitii computum: et si lumen ejus intuemur, videmus eum aemulari Jovem; sed quia magis rutilans apparet, videtur etiam participare de natura Martis. (Quae hic de nova stella paucis proponit Brenggerus, sine dubio spectant Kepleri literas priores, quae, ut supra diximus, deperditae sunt. Quae ad haec respondit Keplerus, leguntur in praefatione ad librum de Nova stella.)

Sed et tempus et charta me monent ut tandem finem faciam scribendi. Vide, mi Keplere, quantum in me creverit de humanitate tua fiducia, ut non verear ea tam diu abuti et omnia, quae in buccam mihi veniunt, ad te libere exarare. Quod si ista responso dignatus fueris, magni quid consequutum me putabo. Gratum mihi feceris, si verum Arcturi et spicae Virginis locum in zodiaco mihi per literas significaveris. Volui enim nuper d. 3. Dec. mane examinare locum Veneris in coelo ac cum Leovitii et Magini Ephemeridibus conferre, ut viderem ad cujus computum propius accederet: deprehendi autem mane circa dimidiam septimam distantiam ejus a spica Virginis 7° 50′ et ab Arcturo 29° 14′. Itaque locis istarum stellarum jam mihi opus est. Secundum tabulas Magini illa est in 18° 8′ Librae, cum lat. mer. 2° 0′, haec in 18° 28′ Librae, cum lat. bor. 31° 30′. Optarim tamen scire an his astipuletur Tychonis observatio.

Vale, Vir ornatissime, et porro rempublicam literariam cum tuis foecundis et ingeniosis lucubrationibus colere et locupletare perge. Insuper, si me Tua amicitia dignum censes, fac ut brevi responsum ad me mittas.

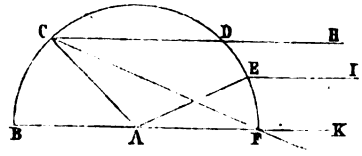
Kauffburnae X. Cal. Jan. 1605.

Tuus
Jo. Georg. Brenggerus,
ibidem Physicus ordinarius.

Keplerus: Miror Te Tychonis Progymnasmatis aequo animo carere. Arcturus anno 1600 completo in 18° 39½′ ♎, lat. 31° 2½′ bor., Spica in 18° 16′, lat. 1° 59′ austr. refertur. Laetor, te observationibus operam dare. At praestat a stella zodiaco vicina ante, et una post planetam pro longitudine observare; pro latitudine vero a septentrionaliori et australiori, quae sunt proxime in eadem cum planeta longitudine.

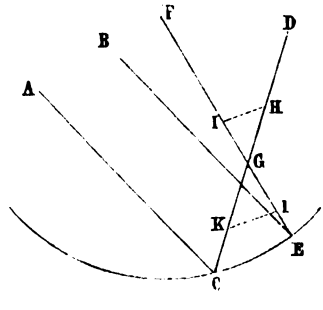
Conclusionis loco proponam tibi opticam quaestionem, cui enodandae plus tibi puto fore otii. Die 20. Dec. visa est iris clarissima in ipso Solis exortu, eaque non tantum hic Pragae, sed etiam Venetiis, Patavii, Oeniponti, Graecii; compara cum attributis aliis, quae perscripsi in Opticis (cap. IV, 7 nota). Vides manifeste, cuilibet iridem apparere propriam, neque tantum ob pluviam sed etiam aëris dispositionem in guttis coëuntis existere. A sit centrum visus, BCDF semicirculus, metiens visionum angulos, Sol sit in linea AF. Posito quod AF sit horizon et quod tam iris quam halo sint nil nisi radii Solis refracti, causa patebit cur centra Solis, visus et arcuum sint in eadem recta, quia circumcirca in eadem recta erit eadem dispositio ad refractionem. Et causa cur

Fig. 28.



piendum: id fit motu capitis, quo unus oculus efficitur tempore quasi duo vel plures oculi. Omnis vero locatio imaginis est mentis seu mavis sensus communis opus. Quicquid enim est imaginis, quae non est rei, id est imaginationis, id est mentis. Ex schemate 53. mei libri negas, S esse locum imaginis: esse enim cuilibet oculo separatum imaginis locum in speculo. Etsi me diutissime prius exercueram in speculis, quam librum scripsi, tamen conjecisti me in novam hanc curam. Nam usque ad oculorum dolorem contemplans non potui deprehendere, quae tu jactas vidisse: una enim imago oblata fuit utrique oculo, simul apertis. Illa quidem major videbatur oculo propinquo, quam vel remotiori vel utrisque apertis. Sed id non est πάθος linearum sed aestimationis, ut cum stellae humiles videntur majores quam verticales. Superficies tam propinqua oculo sentitur velociter locatque imaginem in superficie propiore, quae altero aperto videtur ultra superficiem, quia illi non ita est evidens, quippe remotior. Contra hoc vidi: primum apertis duobus oculis inque imaginem intentis, post altero clauso (in directa globi intuitione), initio quidem uni oculo visa est imago aeque magna et propinqua ac prius utroque aperto oculo: paulo vero post, immoto et oculo et speculo, imago visa est aequalis rei et remota proportionaliter. Nempe ubi nec concursus metatricium nec evidentia superficiei specularis locum conciliat imagini, ibi aestimatio quantitatis, quae desumitur a consueta rei notae quantitate, locationem praestat; verum hoc ibi tantum ubi evanescit quodammodo latitudo pupillae. Summa haec est: dualitate oculorum sublata locus imaginis est tam remotus, ut ex eo res ipsa sub angulo aequali quo nunc imago spectari queat: sin denique haeret memoria loci per duos oculos visi, idem locus est qui apparet et uni oculo. Imo vero jam tandem patescit et tuum experimentum. Intuitus primum uno oculo imaginem, postea et altero aperto orta est imago loco profundiori speculi. Scis tu causam? Genuina et verissima causa est haec: oculi ita assueti sunt, ut, licet defatigentur, tamen ad punctum idem propinquum visibile dirigantur. Itaque cum apertus oculus sit vicinus speculo, reliquus si aperiatur, rapitur etiam ad id punctum speculi, quod est vicinum, quia evidens est, oculi vero idem rotundi speculi punctum intuentes directe necessario vident duas imagines oblique. Ex hoc nascitur clarior explicatio causae et verior. Bini oculi unam videntes imaginem, in illa speculi puncta, quae causantur repercussum, diriguntur oblique, quilibet in suum; et iidem unum speculi punctum intuentes directe, duas vident imagines. Axioma certum est. Jam unus oculus apertus directe fertur in punctum repercutiens, inque eo seu ultra videt et imaginem directe. Superveniens igitur alter oculus idem speculi punctum directe intuetur tantisper, donec aliud punctum inveniat, in quod oblique intuens unam cum socio videat imaginem. Nam perpetuum non est nec durat dualitas imaginis, sed redeunt in unam, licet cum dolore propter contortionem oculorum. Alia et constantior est causa dualitatis imaginis in concavis. Nam sint duo radii AC, BE paralleli ab eadem stella delapsi, qui repercutien-

Fig. 29.



incepisse quando Aquilae lucida elevabatur supra horizontem 30° 50′, h. 3. 13′ (Keplerus in margine: Huennae h. 2. 51′, Graetii h. 2. 59′) matutina. Dein totalem Lunae obscurationem coepisse sub altitudine caudae Cygni 63° 40′, h. 3. 52′. Supputavi ista ad latitudinem loci 47° 52′. At interim bis deprehendi apud nos polum non elevari ultra 47° 50′, itaque in tempore parumper erratum esse suspicor. Adde quod quadrans cubitalis altitudinem stellarum non satis accurate monstrare potuit. Optarim ex hac observatione certior fieri de longitudine loci ejusque distantia a meridiano Huennensi, ad quem Tycho suas tabulas motuum Solis et Lunae supputavit; item a meridiano tuo Pragensi. Si tu me hac in re juveris, feceris mihi gratissimum.

Vale, Vir Clarissime, et meae loquacitati humanitate Tua ignosce, eaque, quae libere et aperto corde ad Te scripsi, benigne et candide interpretare.

Kauffbürnae Cal. Sept. 1607.

P. S. Hoc anno 1. Julii peculiari instrumento a me dudum excogitato observavi Solis altitudinem meridianam, quae dabatur 65° 23′. Erat Sol juxta computum Tychonianum in 8° 54½′ ♋, cum decl. bor. 23° 14′ 3″. Parallaxis ejus 1′ 12″. Ex his deprehendi lat. Kaufb. 47° 50′ —; eadem mihi provenit etiam ex obs. a. 1596, die 17. (27.) Dec. facta, quae dabat Solis alt. mer. 18° 44′ et parallaxi Solis adjecta 18° 47′ — Erat Solis decl. aust. 23° 23′. Quae omnia collecta monstrabant aequatoris elevationem 42° 10′ et poli alt. 47° 50′. Sed obs. a. 1597. 11. (21.) Jun. obtulit mihi Solis alt. 65° 35′, ex qua mihi resultabat latitudo 47° 55′ Haec in causa fuit, cur hactenus polum modo 47° 52′, modo 51′ altum fecerim. Quin etiam d. 13. (23.) Junii nuper elapsi observationem institui, qua Solis alt. deprehendi 65° 41′; sed quia tunc Sol mihi visus est ipsum meridianum parum transiisse, ideo huic soli observationi fidem adhibere nolui, et aliam institui d. 1. Julii, de qua supra. Ego jam non dubito nostram latitudinem 47° 50′ asserere; utinam de longitudine aeque certus esse possem. Quaeris, cur hoc tantopere desiderem? Dicam. Cogitavi diu de ratione, qua commodissime cometarum, si quando apparent, parallaxis eorumque a Terra distantia investigari possit: sed nullam invenire potui commodiorem, quam si collata opera duo astronomi duobus longe dissitis locis ejusmodi phaenomeni altitudinem observent eo temporis minuto, quando versatur in circulo azimuth illis communi seu verticem utriusque loci transeunte. Jam vero circulus ille nonnisi ex praecognita illorum locorum longitudine et latitudine haberi potest. Differentiam longitudinis Pragensis et Kauffbürnensis Mercator in suis tabulis geographicis facit 4° fere. Haec si vera est et latitudo Pragensis supponatur 50° 6′, Kauffb. vero 47° 50′, arcus inter vertices nostros interceptus est 3° 28′, et azimuth nobis communis, seu circulus noster verticalis a meridiano tuo versus occasum declinat 58°, a meo 47° 40½′, nisi forte in calculo lapsus sum. Si igitur aliquando cometa vel stella nova alia nobis superstitibus illuxerit, fac ut ejus altitudinem, quando per dictum azimuth transit, aliquoties observes, idem et ego faciam diligentissime aliquot noctibus diversis, deinde nostras observationes conferemus, ut sic aliquid certi eliciamus. Spero enim fore, si crebro hoc fecerimus, ut quandoque utriusque observatio in unum diem atque adeo in unum temporis minutum coincidat.

Sed quid ago? Finem facere jam dudum constitueram, at semper novi aliquid mihi occurrit, de quo tecum conferam.

Vale iterum et me ama.

Keplerus haec posteriora silentio praetermittens his literas suas concludit:

Eclipsis 14. (24.) Apr. 95. extat in Opticis (XI, 20), utere ut potes, puto te non recte supputasse; nam mea observatio, licet crassa, cum Huennensi consentit.

Vale tandem, et quod a me petis, ut amice accipiam quae contra movisti, quia hanc deprecationem necessariam putasti, idem ergo vicissim ut facias rogandum te video. Inprimis domesticum illud, ut a philosopho profectum qui politica non admodum callet, in meliorem partem interpreteris, quantoque magis indecorum est, tanto diligentius celes et cures.

Dabam ultimo Nov. 1607.

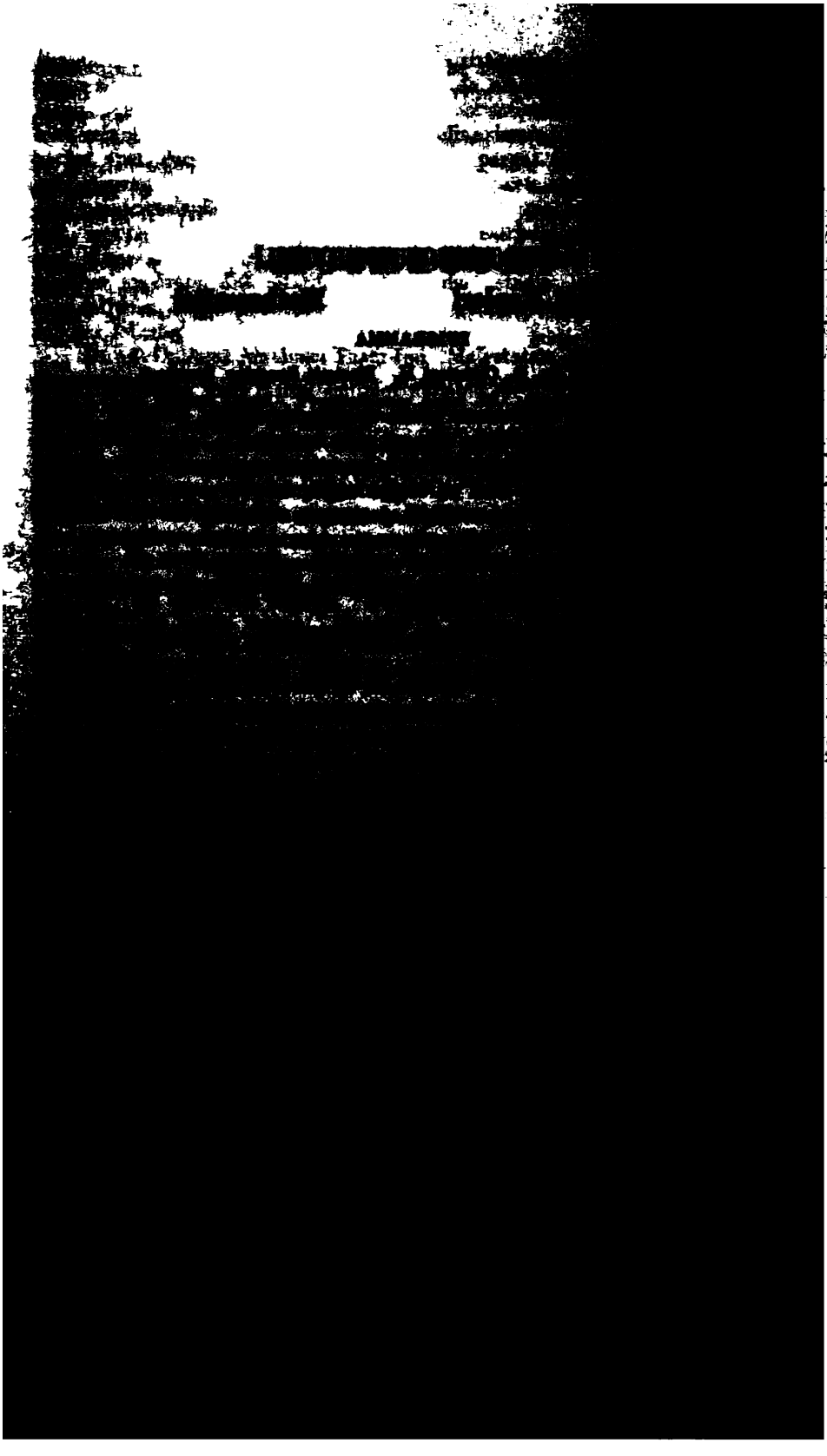
(Spectat hic Keplerus partem hujus ipsius epistolae, alio loco inserendam, in qua invitat Brenggerum, „ut juvenem, medicinae Studiosum, si quem faciei liberalis, morum placidorum, nosset, ad se Pragam mittat“, cui ipse puellam, quae in sua potestate sit (forte ipsius privignam) nuptum daret.)

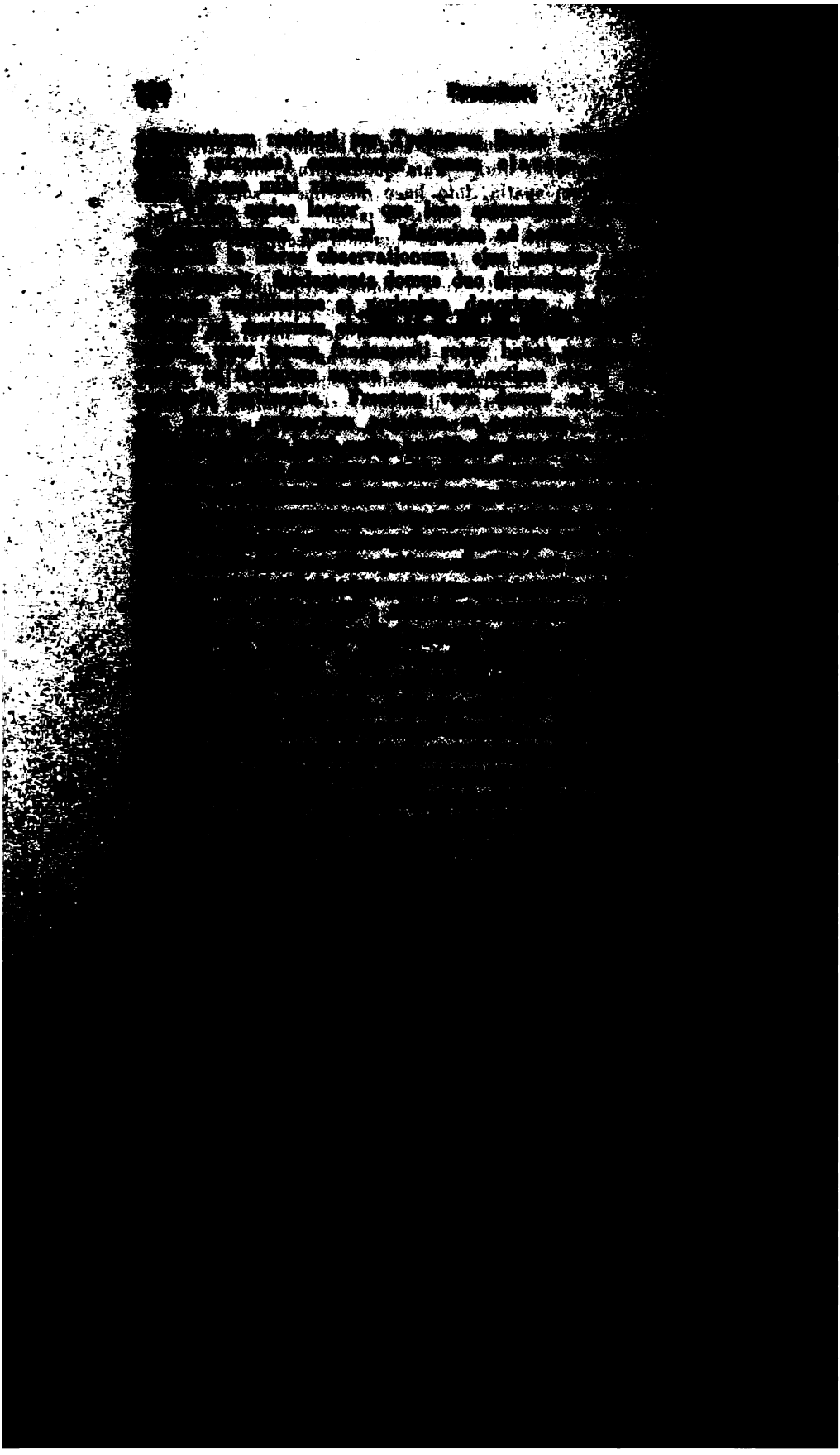
Has Kepleri literas breviores ejusdem literae praecesserant (d. d. 4. Oct.) „octiduo“ post acceptas Brenggeri modo praemissas, in quibus pauca de studiis suis commemorat et postscriptum Brenggeri significans sic concludit:

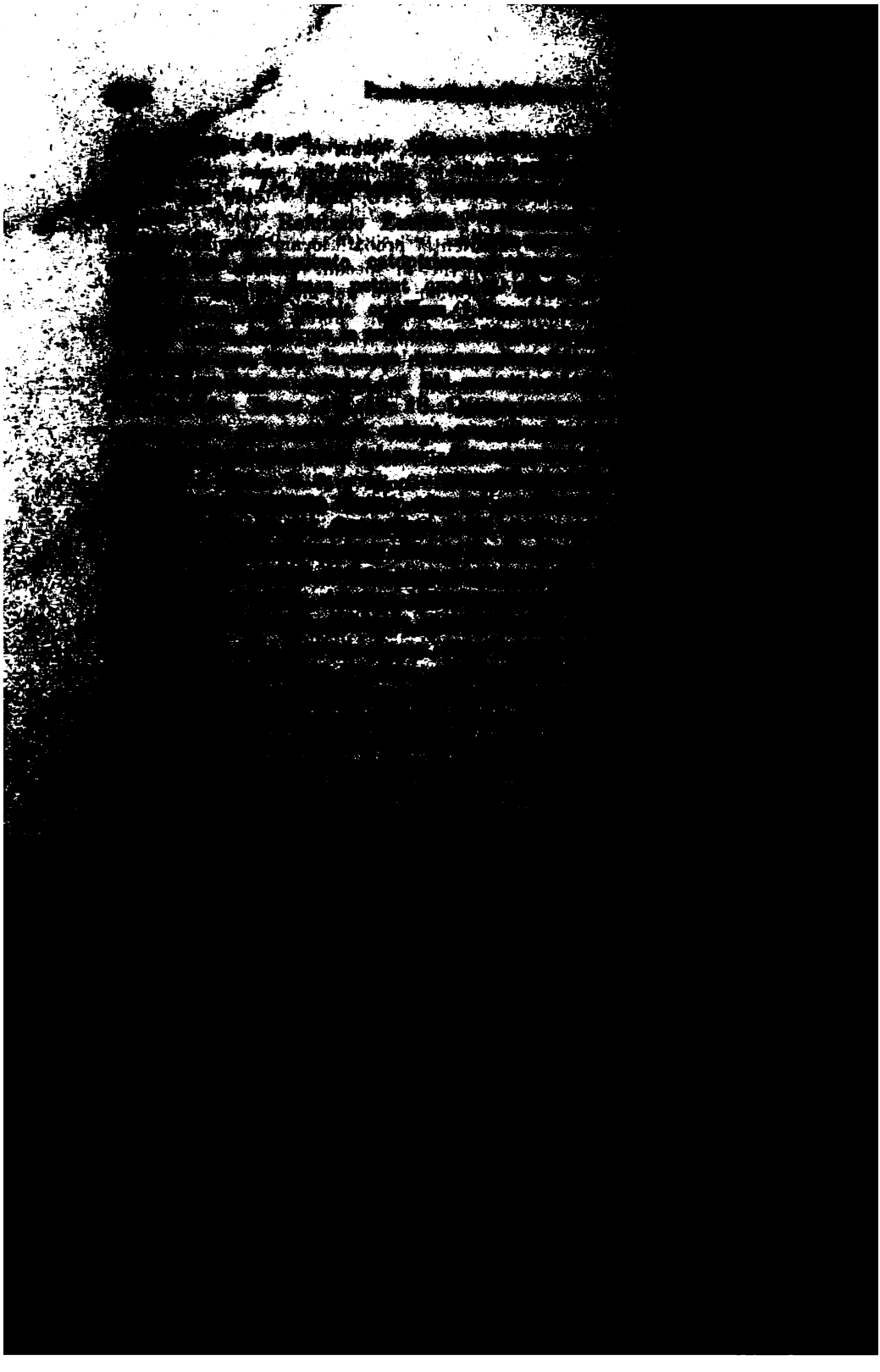
[illegible]

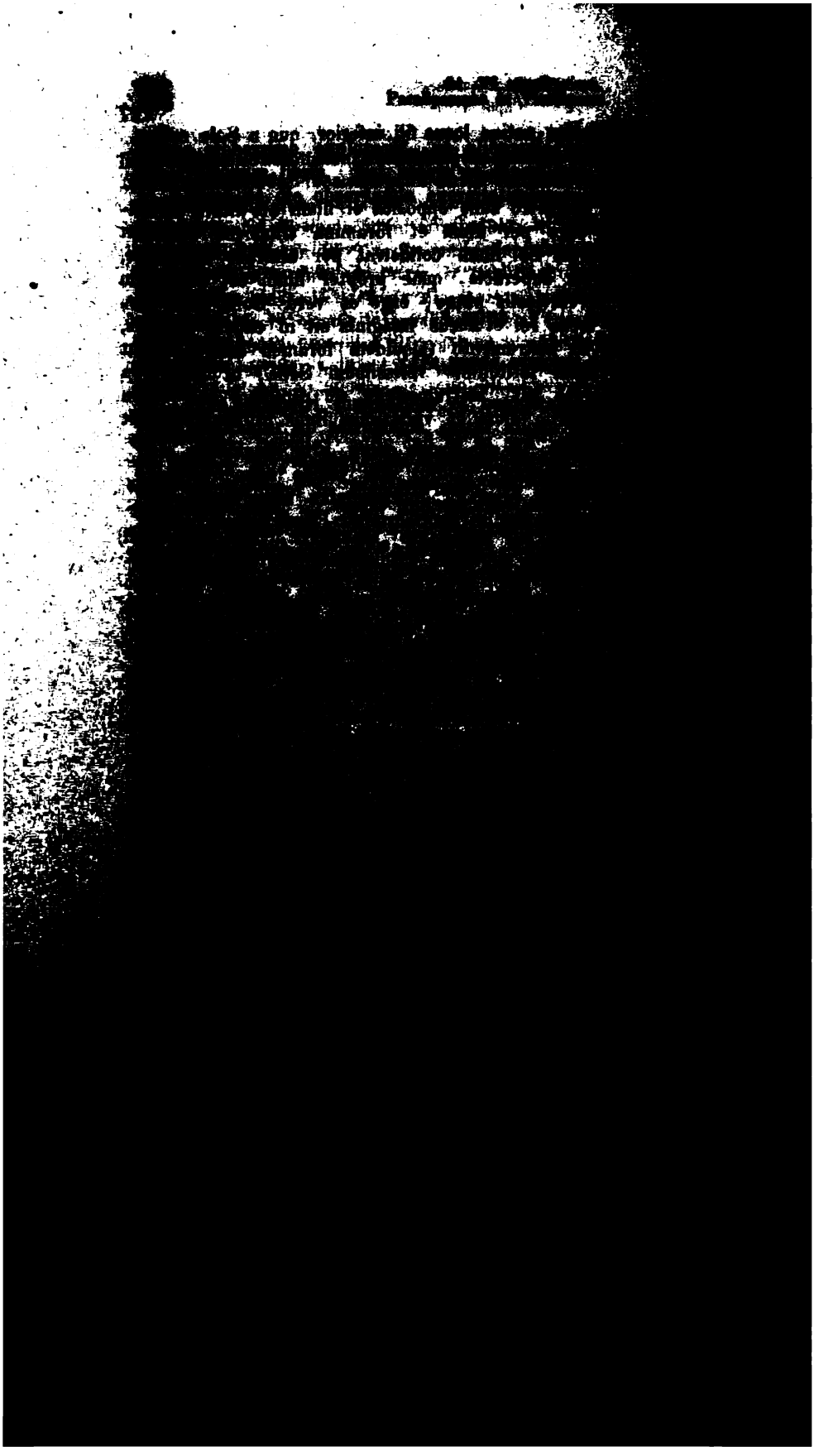
[redacted]

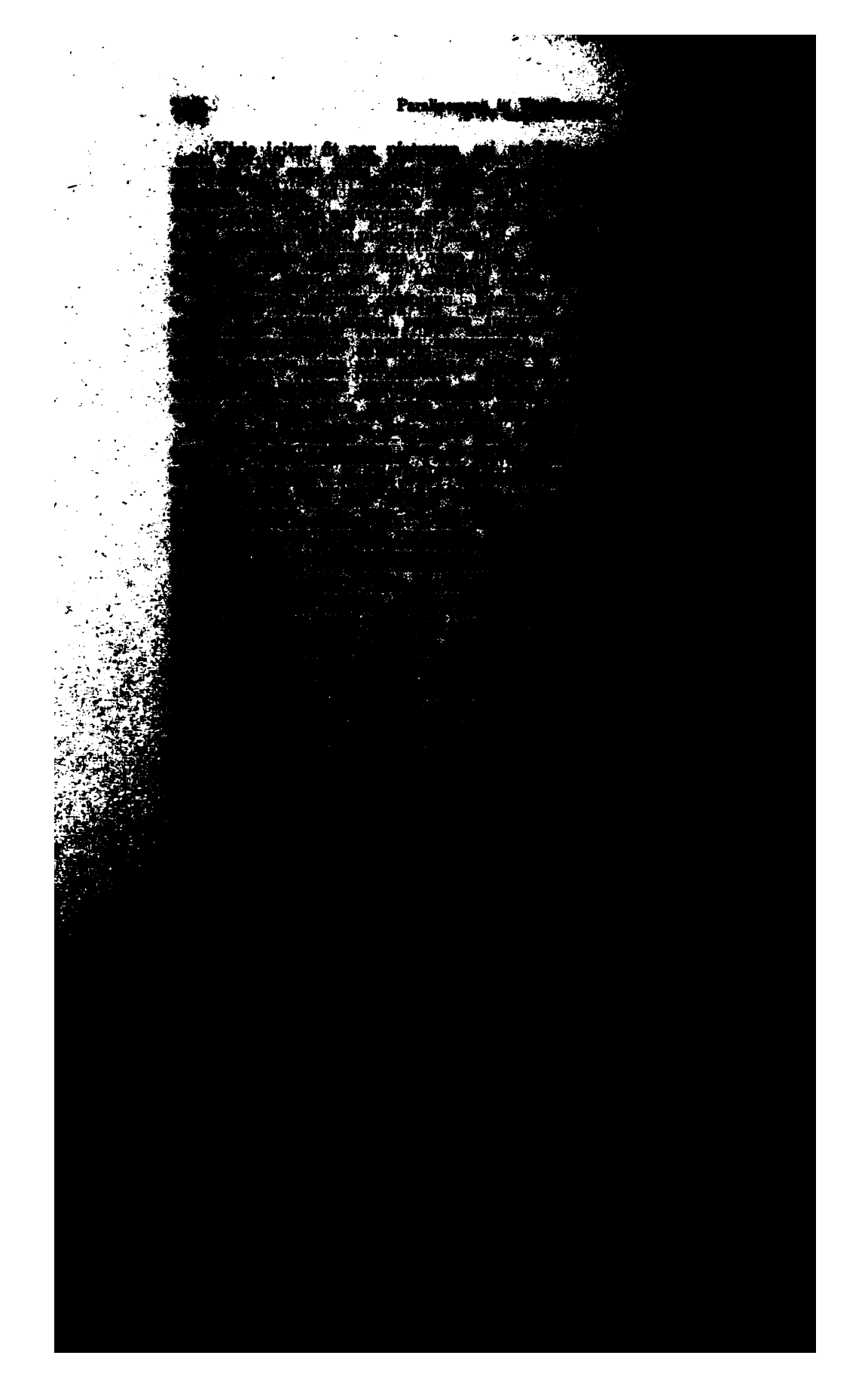
[redacted]











radiorum fere nulla fit nova refractio in anteriore crystallini superficie, quamvis crystallini densius sit medium quam aquei. Rursum autem hic araneae et suo humori, crystallino scilicet, ascribo eandem densitatem causa refractionis, ut et infra vitreo et tunicae hyalinae. Descendunt igitur hi unius puncti radii, quantum eorum per foramen uveae fuit admissum, per omnem profunditatem crystallini semper magis magisque coeuntes, quoad pervenerint ad posteriorem crystallini hyperbolicam superficiem. Adeoque si fieri posset, ut horum radiorum seriem in oculo sectione quis imitaretur, is a summis corneae usque ad ultimas crystallini partes unam eandemque faceret conicam superficiem, cujus quidem amplitudo est foramen uveae illo loco, vertex vero desiturus esset in punctum aliquod post oculum. Jam vero radii hi per conicam posteriorem crystallini superficiem in vitreum egressi, cujus est medium rarius medio crystallini, refringuntur a perpendicularibus in superficiem per puncta refractionum ductis, quare fit ut refracti coeant versus axem; itaque terminantur breviore et obtusiore cono, quam fuerat is, quo hactenus pervenerant. Coeunt igitur denique omnes hi radii ab uno puncto visibili in punctum plane unum, quod est ipsissimum centrum et extremitas nervi optici, quo is loco retinae connectitur. Nam ad hanc crystallini densitatem et futuram harum refractionum magnitudinem natura est dimensa spatium humoris vitrei crystallinum inter et retinam.

Atque haec demum est distinctissima visio, cum universa ejusdem puncti lux, quantacunque sparsa est per amplitudinem coni a foramine uveae admissi, duabus refractionibus, altera in cornea, altera in posteriore crystallini superficie, cogitur, et unicum retinae punctum, ipsissimum nempe orificium nervi, facultatem visoriam seu spiritum vehentis, fortissime illustrat, adque id punctum nulli alii ab ullo alio lucente puncto radii allabi possunt, beneficio nigroris et opacitatis uveae, angustiae foraminis, ciliarium processuum, et ceterorum, de quibus paulo post dicetur.

Ceterum quod hactenus nobis fuit propositum visibile, id punctum fuit, non corpus: quare partes non habuit neque distincta dextra a sinistris, supera ab inferis. Neque vere visibile sed elementum, seu magis terminus rei visibilis; uti et ipsa puncti visio hactenus explicata non est accipienda pro consummata visione, sed pro quodam visionis elemento. Nam ut in re visibili sunt multa puncta, ita et multa rei illius visionis quasi elementa. Manetque III. 19. Vitellionis nihilominus: nihil videri, nisi cujus sit aliqua magnitudo proportionabilis. Sit ergo punctum aliud juxta prius et directe oppositum, declinans ab eo ad dextram. Illud igitur punctum corneam ipsum quoque illustrabit et subjectam iridem, ejusque foramen intuebitur ex obliquo. Itaque radii per foraminis circulum intromissi speciem exhibebunt coni scaleni, qui secabit conum rectum prioris puncti in foramine uveae et post sectionem intra uveam concedet in partes sinistras, illustrans partem quidem superficiei crystallini a priori etiam illustratam, partem vero a priori puncto non illustratam, sed sinistriorem; et fit pene idem, quod supra cap. II. demonstravimus in clausa camera fieri. Nam pupilla est fenestrae loco, crystallinus loco oppositae tabulae: nisi quod ob pupillae et crystallini propinquitatem hic nondum facta est plenaria intersectio; quare confusa adhuc omnia. In anteriorem igitur superficiem crystallini conus hic sinister factus incidens refringetur versus conum rectum, obliquus tamen nihilominus crystallinum trajicit, tantoque rectius impingit in superficiem hyperbolicam crystallini, ubi iterum sed parum versus conum priorem direc-

[illegible]

dilueret, quem ad usum procul dubio motum obtinebunt sese inflandi, turg faciendi in clara luce et extenuandi in maligna, ut uvea. Et hyperbc quidem vel ei cognata figura est in posteriori parte crystallini, ut qui in hyperbolam deorsum tendunt ejusdem recti coni radii convergentes ad ide punctum, ii ad idem sed brevius distans punctum colligerentur: quod n in alia figura fieri posse infra demonstrabitur. Gibba vero est superfici anterior crystallini, ut quo obliquius foramen uveae objicitur puncto radian hoc devexius haec superficies a cono scaleno secaretur, itaque servaret aequalitas interceptae a cono quantitatis, quantum fieri posset: utq omnibus in cornea (ab eodem certo puncto venientibus) refractis et in ide punctum post refractionem tendentibus perpendiculariter subjiceretur: plan circularem seu sphaericam esse statuo hanc anteriorem crystallini superficiem

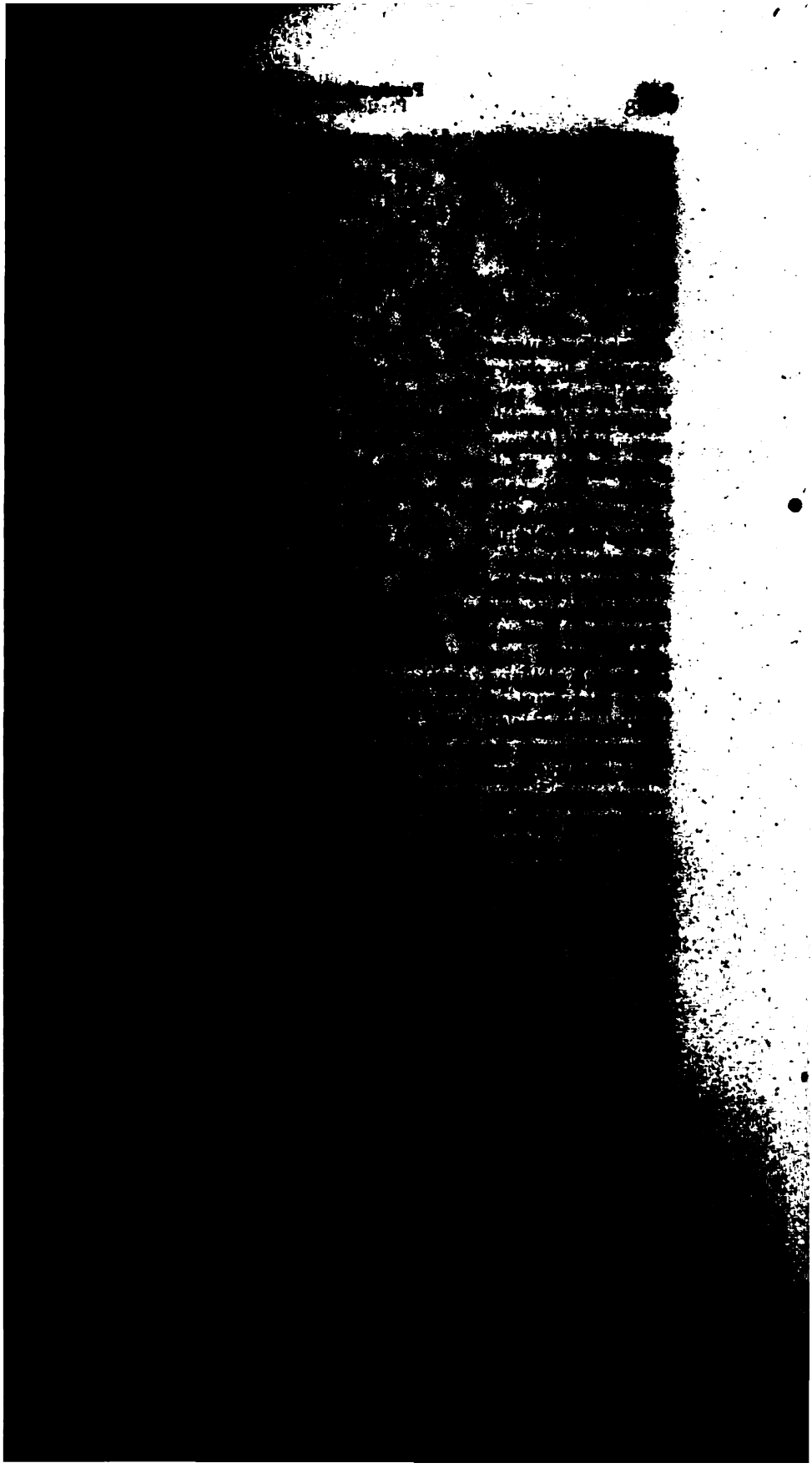
Uvea tota cum ciliaribus processibus adest tantum ad obscuritaten inducendam, ne lux nimia sit molesta. Ad speciem seu picturam formandam nihil confert, neque si conferret, unquam illam absolveret et perficeret, cum foramen nimis sit amplum pro oculi angustia. Imo in tenebris constitutis dilatatur triplo laxius quam in luce Solis, ut in tenebris quidem majorem partem superficiei crystallini detegat, quo plus lucis tam debilis per crystallinum ad idem punctum collectum (quae collectio ad idem punctum a crystallino fit sine ope foraminis) sensum tanto evidentius moveat: in luce vero angustior est, ut plus lucis excludat, ne tam fortis lux sensum laedat. Itaque situs foraminis hujus ibi est, ubi est intersectio radiorum, causa ipsius crystallini existens; quamvis haec intersectio non fiat in puncto, sed in longissimum conum spargatur ob circularem crystallini superficiem. Situs igitur foraminis fit basis hujus intersectionum coni. Nam inter hoc foramen et crystallinum nulla est intersectio, et si quid ibi esset visui expositum, videretur eversum et confusum. Intus uvea est aspera, ne levis si esset, repercussum efficeret radii ex crystallini superficie in se repercussi. Tota nigra, etiam qua retinam complectitur, substantiae similitudine. Nutrimentum enim, quo anteriora nigra fieri debuere, per choroidem transitum habet. Nisi forte et retina perspicuitatem habeat haecque nigra illam terminet.

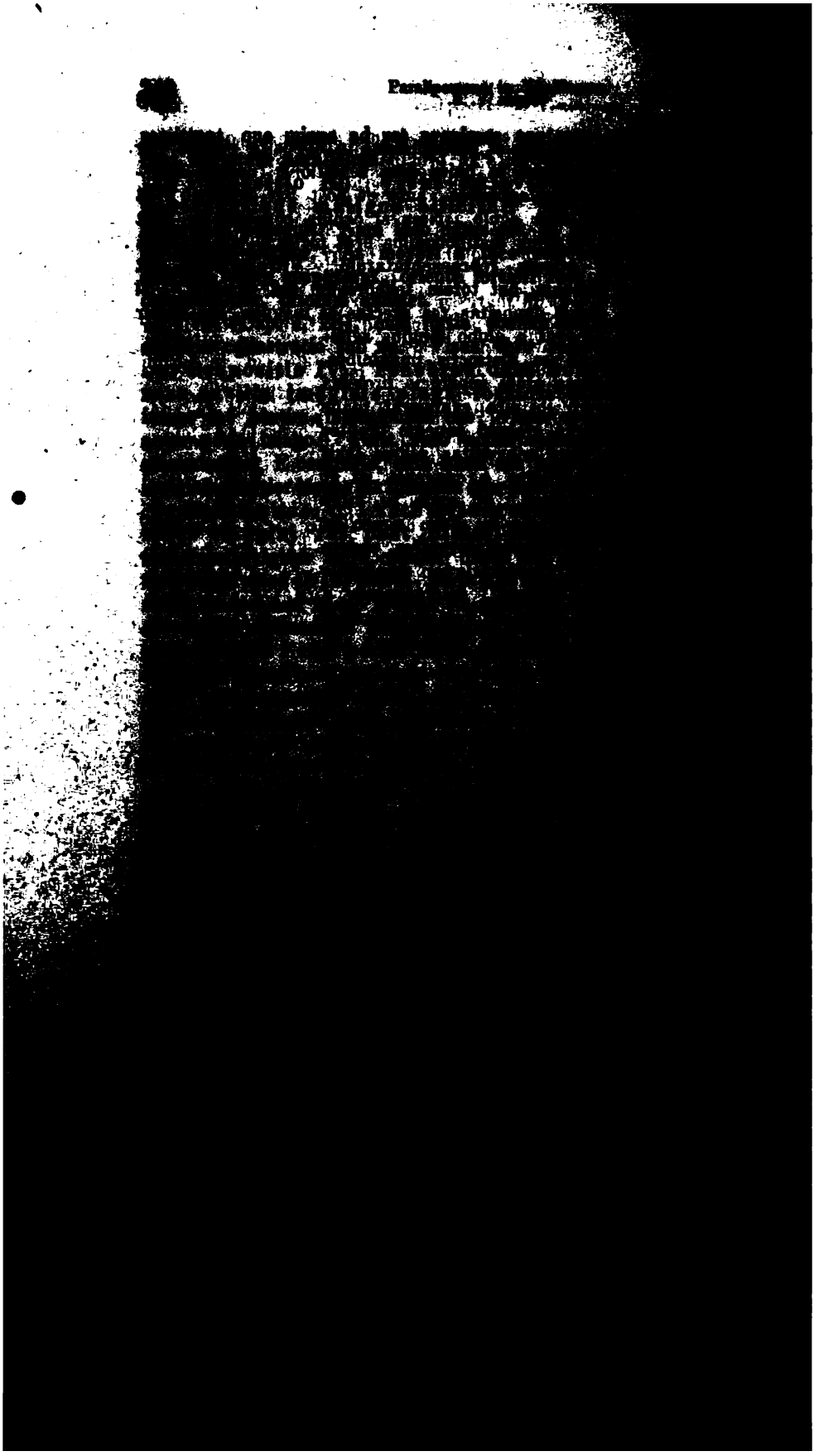
Aquei humoris necessitas fuit ad cameras implendas et refractionem in cornea factam continuandam, ut una esset usque ad crystallinum.

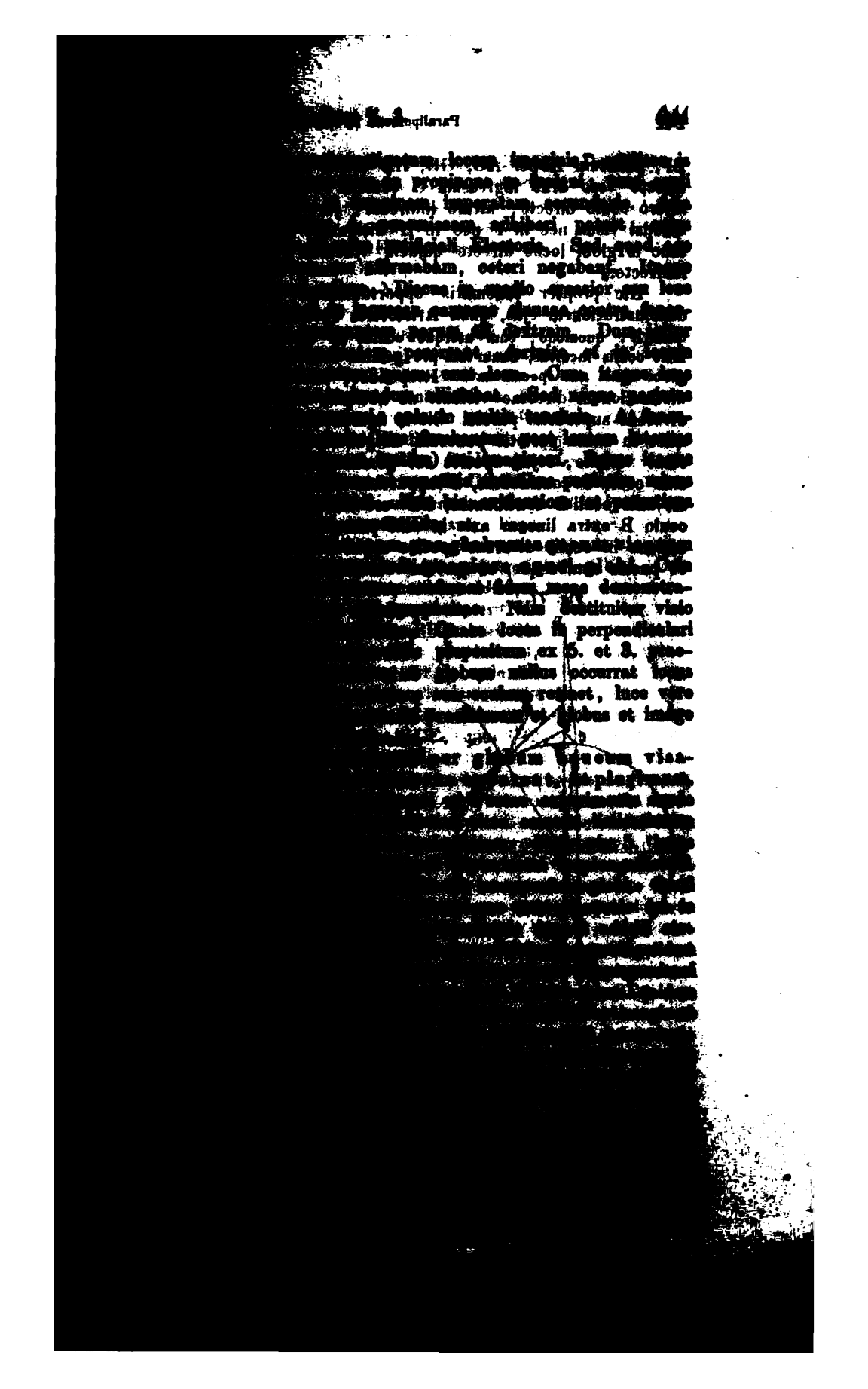
Cornea tunica et ipsa videtur esse portiuncula sphaeroidis, ut qui in anteriorem crystallini superficiem incidunt, perpendiculares ad unum punctum coire possint. Nihil tamen impedit et corneae perfectam esse rotunditatem, ut infra dicetur.

3. Demonstratio eorum, quae circa modum visionis de crystallino dicta sunt.

Quaecunque fere hactenus de crystallino dicta sunt, eorum vulgari passim cernuntur experimenta in pilis crystallinis, inque vitris urinarii limpida aqua repletis. Etenim si quis cum hujusmodi globo crystallino ve aqueo contra fenestram vitream stet in conclavi aliquo, adhibeatque albu papyrum post globum, semidiametro globi a margine globi remotam, fenestr vitrea cum intextis ex ligno et plumbo canalibus vitrorum limbos obeunt tibus clarissime pingitur super papyrum, everso tamen situ. Idem faci res ceterae, si paulo plus obtenebretur locus; adeo ut globo aqueo cameram quam supra descripsimus (cap. II, p. 7) illato et fenestellae opp sito, quaecunque per amplitudinem fenestellae seu foraminis possunt







[illegible] planetam A per [illegible] directe vero erit [illegible] altero oculo directe, altero indirecte, fore [illegible] quodai [illegible] nec in F nec in H dirigatur, [illegible] locus directe quidem videbitur, [illegible] indirecte.

Hic propter schematis opportunitatem [illegible] demonstrationem ejus, quod Aristoteles docebat [illegible] quomodo, tum utraque oculus in [illegible] oculis [illegible], tum res pro genuina [illegible] quod est [illegible] Respondeo, [illegible] directe videntur [illegible] angulus [illegible] B extra lineam axis [illegible]

ut omnes radiationes post [illegible]
ratio duplicatur, quia per [illegible] Vitellidis [illegible]
sive ab aqua in aërem, sive ab hac in [illegible]

Denique quia refractiones non [illegible] propor[illegible]
sed multo majores anguli refractionum [illegible] quam
incidentiae: ergo rursum nova causa accedit, [illegible]
pendiculari distantes propius quam antea [illegible]
propiores axi longius [illegible] quam antea [illegible]

Propositio X. Problema [illegible]
quodcunque radium alicujus puncti [illegible]
ut refractus non concurrat cum [illegible]
sphaeram tacto. Subiplatur punctum [illegible] quodcunque non per centrum A, [illegible]
[illegible] singulo [illegible] quadrati [illegible]
idem sphaerae (Cap. [illegible] N. 6 [illegible]
[illegible] GL parallela [illegible]
punctum projicere [illegible]
H G, non concurrat cum AD [illegible]
[illegible] est converso [illegible]

Propositio XI. Impossibile [illegible]
non densissimo [illegible] a [illegible]
[illegible] in idem punctum [illegible]
[illegible]ndere. Nam [illegible]
[illegible] omnes inclin[illegible]
[illegible] cum inclin[illegible]
[illegible]dui secans id[illegible]
[illegible]ibus differant [illegible]
refractionum [illegible]
diversarum [illegible]

[illegible] exterior. Cum autem [illegible] FAD, multo minus igitur IC [illegible] Demonstratum igitur [illegible] cum FAD. Sed neque ab ullo puncto [illegible] globum. [illegible] ex I, sectione in G [illegible] non concurrat, multo minus [illegible] IH [illegible] jam punctum quodcunque [illegible] radiationem ex O concurr[illegible] in H punctum, quod [illegible] puncto se [illegible] Ergo in H [illegible] concurrens ex I, et GI [illegible] omnino, quare concurr[illegible]

[illegible] 10 [illegible] ADC [illegible]

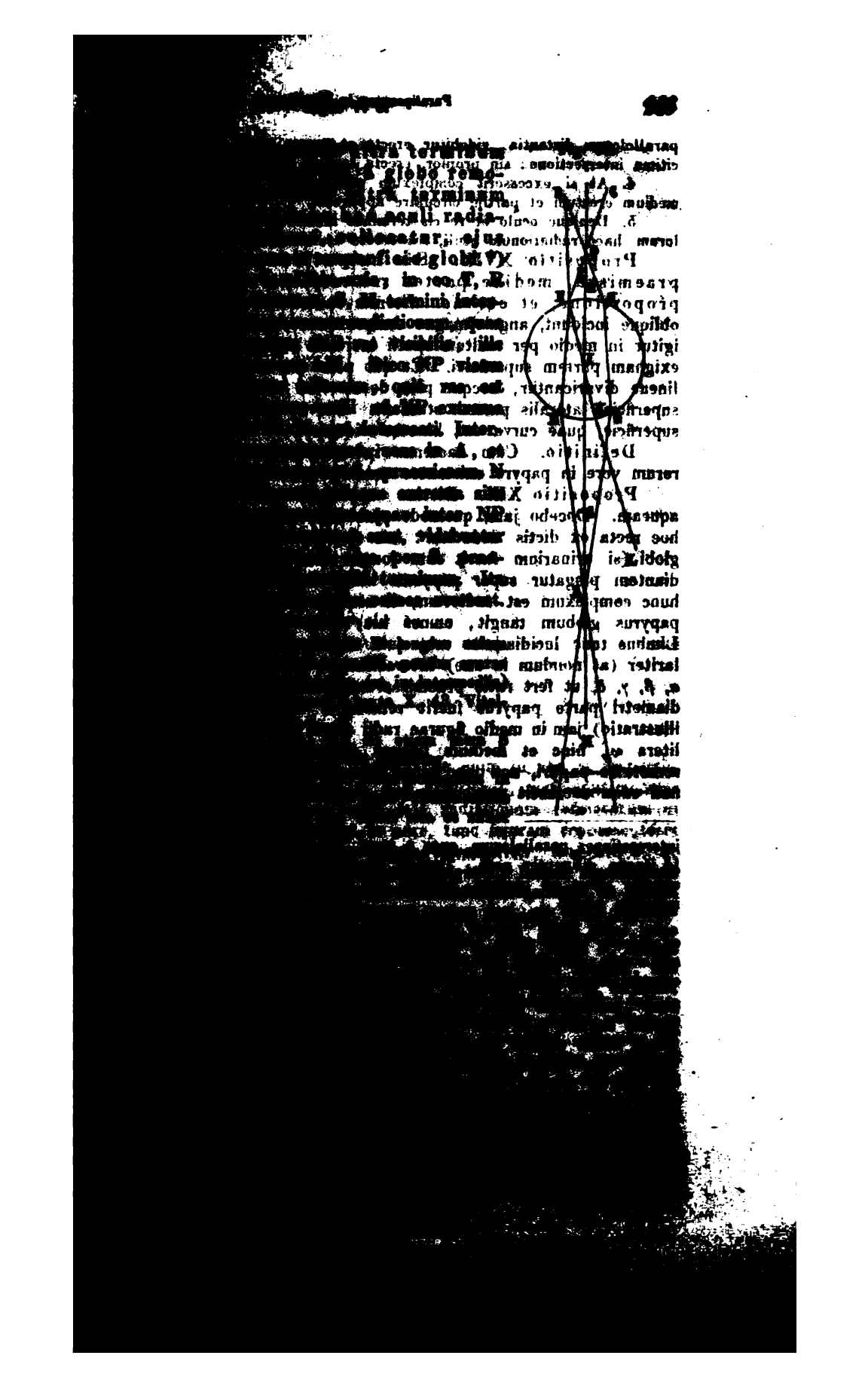
[illegible] secans [illegible] refractionem [illegible] diversarum [illegible]

In aqueo globo determinare

[illegible] geometrice designare desideravi. [illegible]
[illegible] quibus in punctis, et ejus quibus maxime [illegible]
centrum. Nam per 8. hujus probavi, omnes [illegible]
facta, concurrere cum axe. Cur autem non [illegible]
concurrerunt, sed conferta sint in fine ac [illegible]
ad vicinorum: qualitercunque demonstrabo [illegible]
Nam primum refractionem, ut prop. 8. IV. [illegible]
sibile est, quin proportionentur incidentiis [illegible]
nationi parva. Quare refractio remotiorum [illegible]
intransibiliter est major quam refractio proximorum [illegible]
in summa, vere pr. 9. etiam. [illegible]
[illegible] Ergo refracti proxime repraesentantur in [illegible]
AE, BE, ad idem pene punctum concurrentibus [illegible]
similiter superius secabit AE quam BE, ac [illegible]

Propositio XVI. Puncti, quod a [illegible]
quam ultimus intersectionum [illegible]
mine refractione facta cum axe [illegible]
[illegible] Propositio et ex antecedentibus [illegible]
[illegible] esse conjugata. [illegible]
terminis intersectionum et globo et [illegible]

2. Cum proxime ultimum intersectionum [illegible]
[illegible]



parallelorum distantia, videbitur erecta et eversa simul [illegible] citima intersectione: sin propior, erecta tantum appa[illegible]

4. At si excesserit complexum parallelorum [illegible] medium erectum et partim circulare apparebit. [illegible]

5. Denique oculo et re cis terminos intersection[illegible] lorum, haec radiationum oculi, res erecta et [illegible]

Propositio XVIII. Sic habentibus [illegible] praemissa, mediae partes rei majores [illegible] proportione, et curvae. Etenim radiation[illegible] oblique incidunt, angulo magno comprehensae, [illegible] igitur in medio per multum spatii increscit [illegible] exiguam partem superficiei. Et quo plus [illegible] lineae divaricantur, hocque plus de [illegible] superficiei lateralis partem [illegible]. Curvae [illegible] superficie, quae curva est, [illegible]

Definitio. Cum [illegible] rerum vere in papyro [illegible]

Propositio XIX. [illegible] aqueam. Docebo jam, quomodo [illegible] hoc recta ex dictis [illegible] globi. Si [illegible] [illegible] pingatur supra papyrum [illegible] hunc complexum est [illegible] papyrus globum tangit, omnes hic [illegible] [illegible] [illegible] lateriter ([illegible]) [illegible] α, β, γ, [illegible] fere [illegible] [illegible] papyro [illegible] [illegible] in angulo [illegible] radii [illegible]

[illegible]

Quod autem id fit non in ω termino citimam intersectionem ω efficiunt αω, βγ ra[illegible] quia in magna refractione: locum vero [illegible] etiam radii eiusdem lucentis per globum puncti [illegible] collecti tamen et clari, itaque collectos ad [illegible] coni venientes ab aliis punctis rei lucentis sunt [illegible] et partem loci alter alterius occupant, partantque [illegible]

Contra in intersectione postrema ψ [illegible] puncto, proxime circumstantes perpendiculares [illegible] unum punctum per 15. premissam, et quia eodem [illegible] nullam alienam regionem occupant; ut ita [illegible] distincte pingantur. Solummodo radii alieni [illegible] torum allabuntur, sed jam impressi et [illegible] terminaretur; essent igitur eodem loco [illegible] coni: qui, si qua est in hac pictura [illegible] everna est non ob transitos terminos [illegible] ante vitrum, sed quia punctum [illegible] sphaeram radiana, esse fortissime [illegible] conorum ψω in centro sphaerae esse [illegible] Haec est genuina causa inversionis [illegible] quando eo non tegitur aliquo solido [illegible]

Propositio XX. Propinqua [illegible] vitro remotior, [illegible] [illegible]

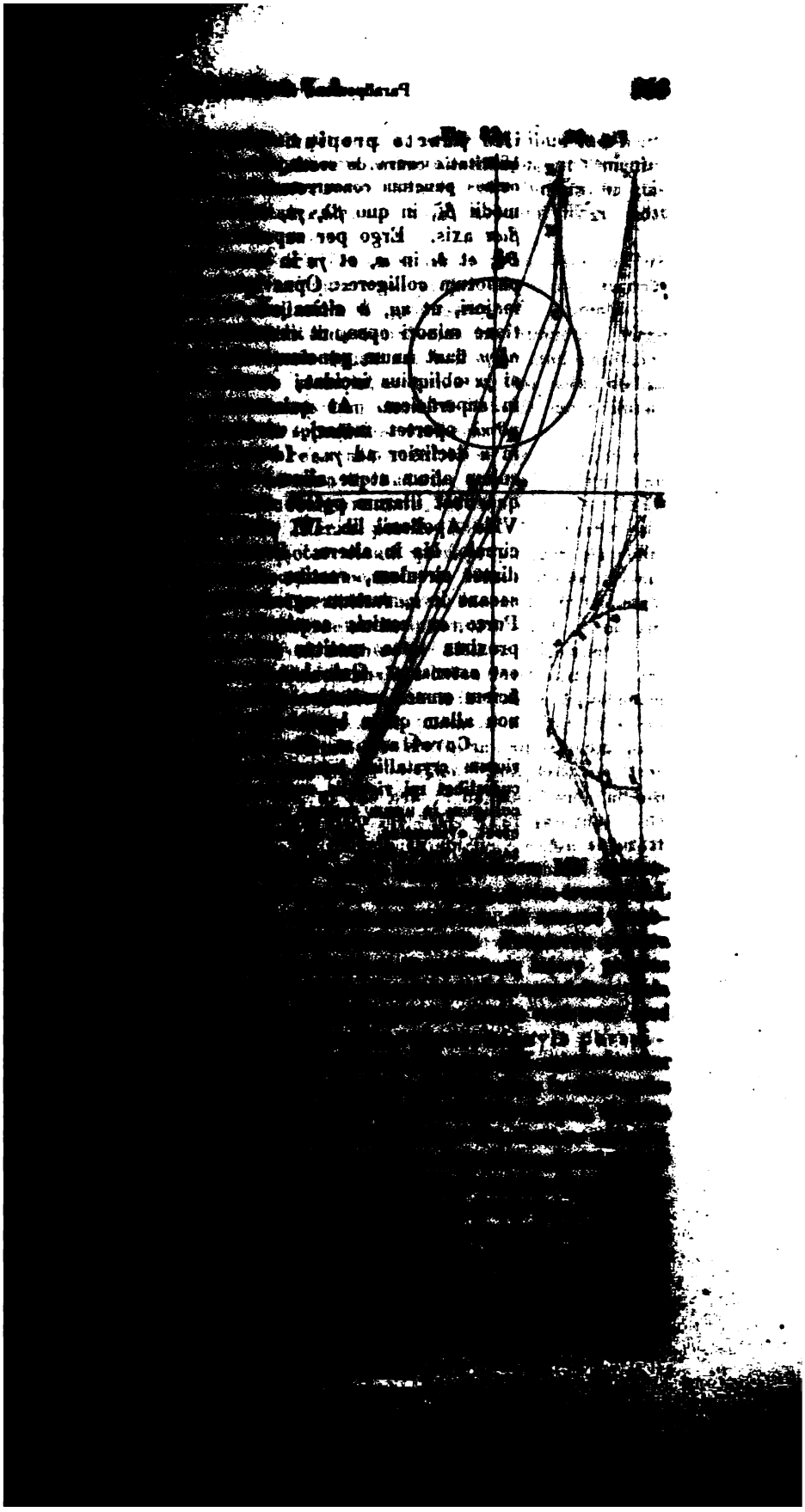


Fig. 33.

illo puncto propius. [illegible] brevitatis causa de rectis, quae [illegible] omnes punctum concurrerent [illegible] medii $\beta\zeta$, in quo $\beta\lambda$, $\gamma\varkappa$, [illegible] $\beta\alpha\pi$ axis. Ergo per superiora [illegible] $\vartheta\eta$, et $\delta\iota$ in ω, et $\gamma\varkappa$ in [illegible] punctum colligere. Opus igitur [illegible] majori, ut $\varkappa\mu$, ω citius cum [illegible] tione minori opus, ut [illegible] $o\xi\mu$ fiant unum punctum. [illegible] si $\gamma\varkappa$ obliquius incidat, [illegible] in superficiem. At quia [illegible] oportet mutari, ut [illegible] in π declivior ad $\gamma\varkappa$. Id [illegible] alium atque alium [illegible] quaelibet illarum potest [illegible] Vide Apollonii lib. IV. [illegible] circulo, bis in altero. [illegible] dictum circulum, rectius [illegible] secans in $\varkappa$, rursum [illegible] Porro ex conicis [illegible] proxima [illegible] [illegible] est [illegible]. Quia [illegible] non aliam [illegible]

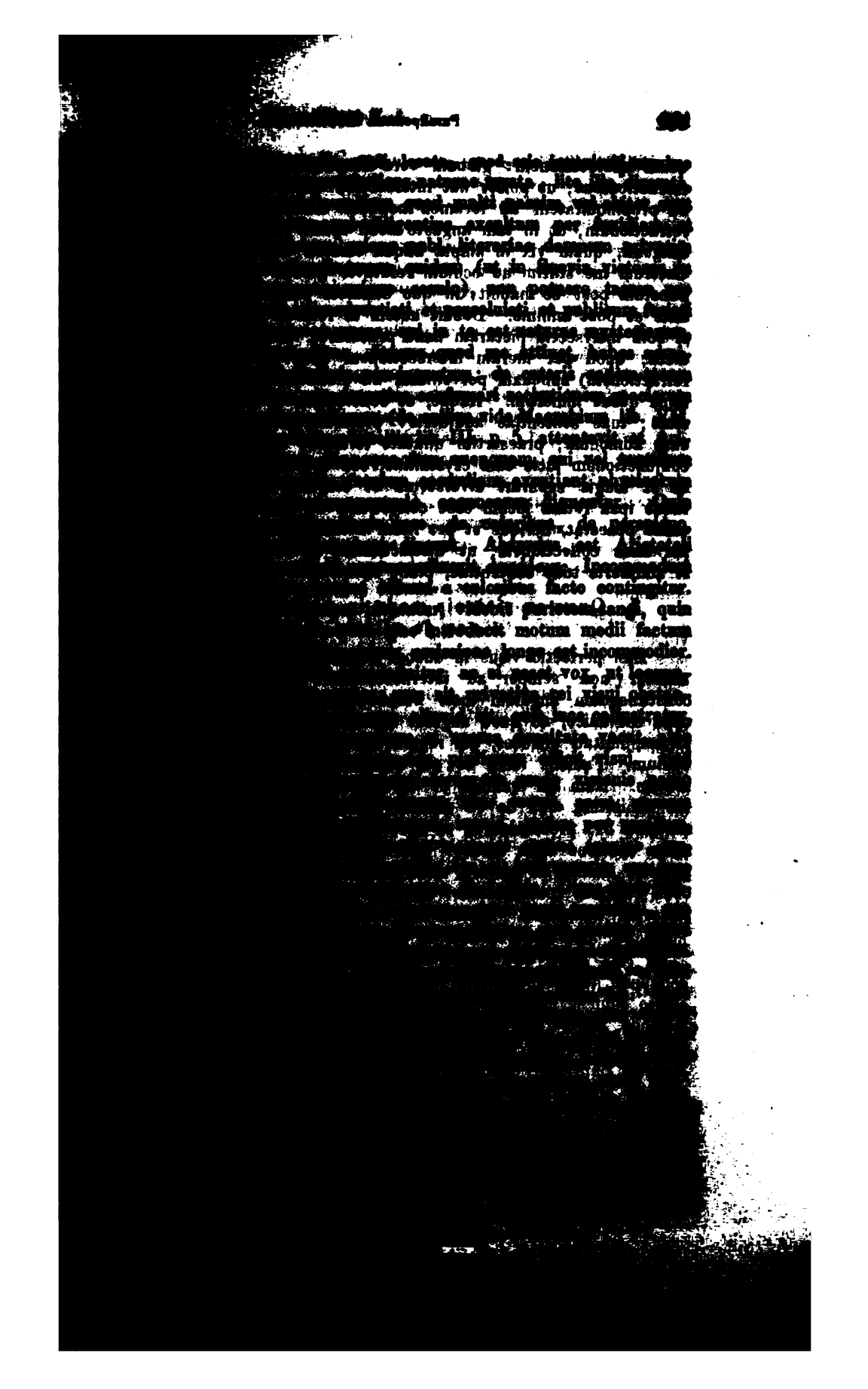
Con[illegible]

[illegible] propinquae rei colli-
[illegible] rum perpetuo retinae
[illegible] rum distinctissimam
[illegible] egissent. Sed nec
[illegible] tum considerentur.
[illegible] linem [illegible], variat
[illegible] situs in retinam,
[illegible] rei visibilis est
[illegible] ad [illegible] per-
[illegible] esse
[illegible] pro una Luna
[illegible] etiam [illegible]

quod quidem unicum habui, quod alim [illegible]
[illegible] fractos ait, convexis proximos majores [illegible]
[illegible] majores, sed non omnibus confusos, [illegible]
[illegible] minores repraesentant, sed iis, qui [illegible]
qui confuse, distinctas. Quodsi quo majora [illegible]
[illegible] convexis nominem juvari oportuit, [illegible]
[illegible] nobilissime validam tuam objectionem, [illegible]
[illegible] in sola pluralitate refractionum. Fractis [illegible]
[illegible] nemo de speculis ut aliquis [illegible]
[illegible] totas respicere, sed ad rerum singula [illegible]
[illegible] ergo punctum distinctae visionis [illegible]
[illegible] convexis nisi speculis radiationum eisdem [illegible]
ut quasi a longinqua advenire et ponlum [illegible]
[illegible] ad retinam terminandas: qui nisi [illegible]
[illegible] 28. praemissa dixerunt, ut ob radiorum [illegible]
[illegible] retinam terminandas, a retina [illegible]
[illegible] latipedum [illegible]
[illegible]

Vicesimo quinto [illegible]
[illegible]

[illegible] quam et ea [illegible]
[illegible] minime [illegible]
[illegible] subtiliores, quique [illegible]
[illegible] Ubique [illegible]
[illegible] tamen ac [illegible] quidem [illegible]
[illegible] quod [illegible] et [illegible]
[illegible] investigari [illegible] Nam [illegible]
[illegible] [illegible]
[illegible] quod [illegible] Vitellio [illegible]
[illegible] quam [illegible] distinguit [illegible]
[illegible] [illegible] in [illegible]
[illegible] [illegible] et [illegible]
[illegible] [illegible] [illegible]
[illegible] Aequalis igitur [illegible]
[illegible] Omnes [illegible]
[illegible] Eumenidum [illegible]
turum rei seu hemisphaerii statu [illegible]
[illegible] conditione aequi [illegible]
hemisphaerii punctorum radios confluere in [illegible]
que [illegible] patet, idolum seu imagine [illegible]
Demonstrata igitur [illegible]
visionem fieri dixit per hanc [illegible]
fieri [illegible]



quam intersectionem: globum vero [illegible] refractionibus, ut purior fiat intersectio, [illegible] ob propinquitatem ad foramen nondum [illegible] refractionum, ut in tam angusto oculi spatio [illegible], quam vix in ampla aliqua camera [illegible] Ceterum me statim ad oculum reducenti globus [illegible] post se habuit, in quo distincte [illegible] et post infinite. Debuit autem in [illegible] intersectio picturam [illegible] praestaret. [illegible] quod per alteram intersectionem [illegible] nunquam pervenimus ad [illegible] quae inferiora. Itaque, [illegible] sententiae [illegible] praesertim [illegible] foramine [illegible] crystallino [illegible] separari [illegible] et [illegible] retinae [illegible] concurrere [illegible] et per [illegible] collectionem, ut [illegible] tunica [illegible]

[illegible]

demonstrationem attinet, ea manet. Archimedis [illegible]
dictae ab extremis rectis [illegible] ut [illegible]
capitum [illegible] collocatum in [illegible] (schematis [illegible]
centrum virtus. Dictum enim est [illegible]
contrahitur rectae transitaeas, centrum hoc [illegible]
figurae). Sit ergo in schemate 86 [illegible]
contrahitur in rationem CM : DN. Erunt [illegible]
[illegible] dictae quamvis C, D non plana
[illegible] sine esse pinxerint. Sit igitur [illegible]
[illegible] per visionem connexi essent in [illegible] centro
[illegible] MK : NL, ut si res sita, ut [illegible]
[illegible] Archimedeae [illegible]
[illegible] Solis diametrum attinet, in qua [illegible]
[illegible] contrahitur. Ita est dum ab [illegible]
[illegible] Sol post [illegible]
[illegible] Nunc Archimedem locum [illegible] non
[illegible] magnitudinem [illegible] concurrere [illegible]
[illegible] eorum, quae esse ab [illegible]
[illegible] Quo homine [illegible]
[illegible] Centrum enim [illegible]
[illegible] contrahitur, destruitur, et [illegible]
[illegible] centrum [illegible] et [illegible]
[illegible] Idcomnes [illegible]
[illegible]

[illegible] Landgravii; et magis [illegible]
[illegible] 21. Sed [illegible] quidem formae Landgravianae [illegible]
[illegible] sentant ab primum punctum [illegible]
[illegible] Landgravii. Et refert fol. 28. [illegible]
[illegible] formam, quae effecta Tychonicae [illegible]
[illegible] Tychonico sentant observatorum [illegible]
[illegible] cylindrum in centro instrumentorum [illegible]
[illegible] ita [illegible] cylindri, [illegible]
[illegible] Itaque Tycho fol. 38. et Landgravius [illegible]
[illegible] et fortasse [illegible]
[illegible] et [illegible], qui [illegible]
Vita et Mechanica Tychonis folio H 5. — [illegible]
[illegible] astronomicis [illegible]
[illegible] Landgravii [illegible]
[illegible] 1600. [illegible]
[illegible]

[illegible]

[illegible]

[illegible]

initio. Terrae non attributum neque ab [illegible]
constans: quid prohibet, quin seorsim id subsistat, [illegible]
[illegible] partibus &c. Et infra: Probabile est [illegible]
multis in partibus terram habere, in multis [illegible]
sed ratione disponente. Nam neque oculis [illegible]
cor sua gravitate in pectus delapsum [illegible]
modo erit conducibilius. Et quae pulcherrime [illegible]

Quod autem certam [illegible]
aequiparans eam residuo materiae [illegible]
[illegible]
[illegible] tantum recepit cornoris [illegible]
[illegible] vel hoc tam arcte [illegible]
[illegible] one v i potuerit. [illegible]

[illegible] (fig. 19).

[illegible] plana, [illegible] hac [illegible]

[illegible] IV. [illegible]

[illegible] ac quia [illegible] A. [illegible]

[illegible] fiat egressus ullius puncti [illegible] figuratis, nisi in lineis

[illegible]

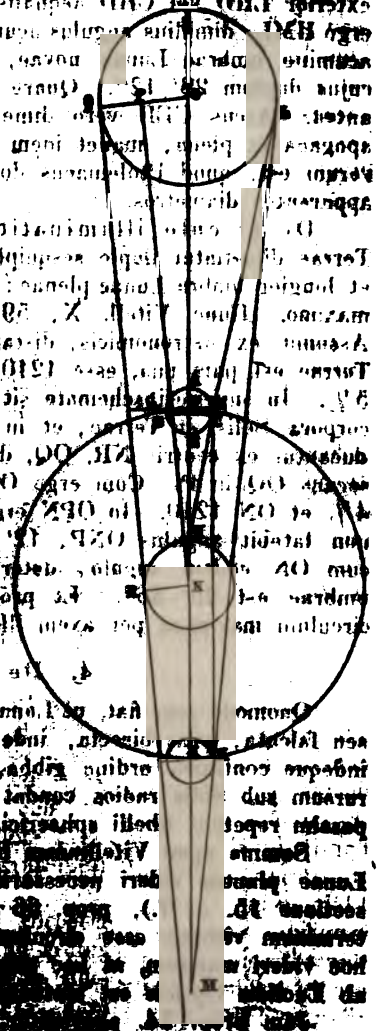
[illegible] Quare in Luna Sole [illegible] chromoirde cernemus. Quae enim [illegible] quanto corporis fiat, ubi angulis quae [illegible] faciant, possunt esse aequales [illegible] eversamus, neque illa: [illegible] illustrata, sed interdum tota [illegible] et in utraque marginibus falcata [illegible] qui [illegible] omnibus luminis [illegible] quaerimus [illegible] reductis [illegible] perpetuam [illegible] Solem, quae [illegible] quaeque effugia [illegible] quantum lucis speciem, ortam a reper- [illegible] communicatae lucis attribui.

[illegible] verissime evincitur; Lunam non [illegible]

[illegible] volunt fortasse per eam illam [illegible] defectuum causam, quam Lunam) in hac [illegible] rem globo, quod Luna instar speculi lucem [illegible] cum Terra, radiis perfusa Solis, tantum [illegible] pia est utriusque ratio Terrae et Lunae. [illegible] quod recte supra Plutarchus et Arabs ille et Cleo[illegible] Terra non lucet luce communicata: quod [illegible] probatum exemplis omnium parietum: [illegible] vestium. Quodsi Cleomedes, id quod ipse celebrat [illegible] eclipsim dici patitur, quem supra definivi lucem [illegible] cetera plane mecum loquitur mecumque concludit [illegible] Posidonium utrique et Lunae et Terrae [illegible] luna, Solis radient in dimidium orbem, ut [illegible] et Lunae paria faciant. De hac itaque Lunae [illegible] astronomi: quod a Sole veniat quodque hic Luna [illegible] se exhibeat, quam quilibet obvius paries [illegible] Hoc fundamento posito jam varias hujus [illegible] dicitant astronomi. Primum disputant [illegible] iidem forma sphaerica, sed miseri! Lunam [illegible] parte a Sole illuminari, et terminum illuminationis [illegible] tamen, qui in sphaerico Lunae corpore [illegible] Vitellionis. Hinc jam anticipata opera [illegible] et dimensiones docent investigare, magnifidicent [illegible]

3. De circulo illuminationis Lunae.

Hujus cognitio nobis posteriori [illegible] commentario super Theorica Purbachii [illegible] siderum coelestium studiosis dogmata [illegible] circulus illuminationis hujus. Sit Orbis [illegible] ductus quod circulus illuminationis [illegible]



CLK 1′ 34″. [illegible]) In triangulo igitur HLM [illegible] exterior LHD vel CHD aequalis est interiori [illegible] ergo HML, dimidius angulus acuminis umbrae [illegible] acumine umbrae Lunae novae, spatio HLM 1′ 34″, cujus duplum 28′ 12″. Quare his CAB erit 190° [illegible] antea. Arcus CEB vero dimetiens circulum [illegible] apogaea et plena, manet idem qui prius, nempe 170 [illegible] verum est, quod Ptolemaeus docuit, Lunae [illegible] apparentes diametros.

De circulo illuminationis Terrae. [illegible] Terrae dimetiatur duplo sesquiplo suae diametri, [illegible] et longior umbra Lunae plenae: circulus igitur [illegible] maximo. Hunc Vitell. X, 59. docet investigare [illegible] Assumit ex astronomicis, distantiam Solis a Terra [illegible] Terrae est pars una, esse 1210, [illegible] 5½. In supposito schemate sit N centrum Terrae [illegible] corpora Solis et Terrae, et in puncto [illegible] ducantur ex centris NR, OQ, denique [illegible] secana OQ in P. Cum ergo OQ sit 5½, [illegible] 4½ et ON 1210. In OPN ergo rectangulo [illegible] non latebit angulus ONP, 12′ 48″. [illegible] cum ON eodem angulo, determinatus [illegible] umbrae est 25′ 36″. Et proinde [illegible] circulum maximum per axem illuminationis in [illegible]

4. De Lunae [illegible]

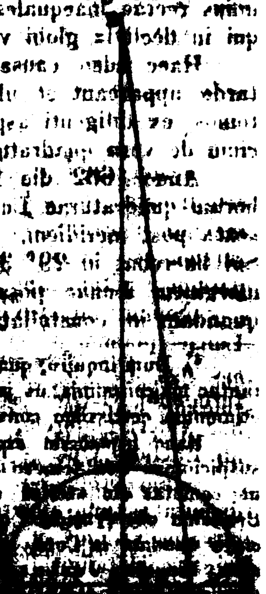
Quomodo jam fiat, ut Luna [illegible] seu falcata, [illegible] bisecta, inde [illegible] indeque [illegible] ordine gibba, [illegible] [illegible] Vitell. [illegible] Lunae [illegible] [illegible]

... Reinholdi ... principi ... libello de facie Lunae ... videtur ... quod istius ... sit avulsa a se et suis finibus circumscriptio, tertiae cujusdam figurae efficit.

... ex phaseos quantitate.

... phasin pertinet, Reinholdus rursum monet, ... dependens digressio Lunae a Sole, quod ... continuatur, ejusque verum sensum conjectavit ... Reinholdo Plinius dicere videtur, summa ... tendentem. Plinii itaque locum ... adjiciam (auct- ... die ... ante latet vel ... pleno orbi ... in diminutione ... Id est, quia Luna in oppositione duodecim ... totam Lunae ... digitos dividitur, ideo quot ... digitos habet, ... quia non ... igitur hoc quolibet ... integrum ...

Fig. 88.



... 47 ... Sole ... in ...

aequitur. Ergo latitudo seu augmentum lucentis [illegible] respondet digressui Lunae a Sole [illegible] draturis, ubi maxima est, ostendit esse gradum [illegible]

Quod si omnes subtilitates libet consectari, [illegible] modo, nempe cum FG circulus illuminationis [illegible] circulo visionis, sed plerumque minor, ergo hanc quoque [illegible] inter augmentum partis lucentis et discessum Lunae [illegible]

Sed nemo nihil turbaretur proportio aequalis [illegible] non tamen ideo visus citra errorem sit futurus [illegible] latitudinis cornu lucentis diei aetatis Lunae seu [illegible] pulsae velit colligere. Digiti enim etsi citra [illegible] aequaliter, quo propiores tamen sunt circulo visionis [illegible] stiores, quo magis appropinquant centro disci Lunae [illegible] Cujus rei demonstratio propemodum eadem est [illegible] subtensae arcubus circuli non fiant proportionales [illegible] hoc sint illis subtensae aequaliores; et [illegible] particulae diametri minutam unam addant [illegible] 12°. 51' respondeant. Neque totum [illegible] [illegible] lib. IV. prop. 84. Vitellionis [illegible] libro ejus semicirculus per palum [illegible] recta, unde fit, ut partes minuti particularis [illegible] unius rectae inaequales arcus [illegible] qui in declivia globi veraque [illegible]

Haec ideo causa est [illegible] tarde appareant et ultima [illegible] tomos, ex diligenti aspectu [illegible] cium de vera quadratura [illegible]

Anno 1662 die 11 [illegible] horam quadraturae Lunae [illegible] setta, quae [illegible] Sed [illegible] in 29° [illegible] margines Lunae [illegible] quandam in constellatio[illegible]

[illegible] delineationis [illegible] et [illegible] 30 et 40, et [illegible] videtur Reinhaldus [illegible]

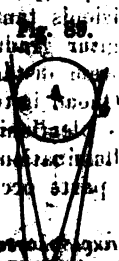
[illegible] verum novilunium [illegible] phasin attinet, monet ipse Vitellio [illegible] Reinhaldus habere hanc phasin [illegible] Sol in plenilunio illustrat partes 180° [illegible] angulo 30', perigaeum [illegible] metriné per polum visionis tanto [illegible] et hoc defectu colligitur gradus [illegible] oppositionis momentum distant [illegible] circiter 30'. Quoad igitur [illegible] durat phasis plenilunii; [illegible] circulum illuminationis [illegible] ut in parte occi- [illegible]

[illegible] contradicendo [illegible] [illegible] eorum [illegible] [illegible] posset [illegible] perfectum [illegible] [illegible] [illegible] adeo una [illegible] spatium justum [illegible] 64 aut 66 [illegible] totidem necesse [illegible] in latum, nisi [illegible] oppositione jam fit [illegible] Lunae [illegible]

fuerit impleta. Non tamen negaverim quin [illegible] aliam reddat obscuriores, dicut solent esse [illegible] solet umbram ingredi, illa parte, propter sectionem [illegible] et visionis, nudior adhuc a luce esse solet. Quare [illegible] valde tenuis particula de corpore Solis hunc Lunae [illegible] lumen etiam Lunae valde hebescere convenit.

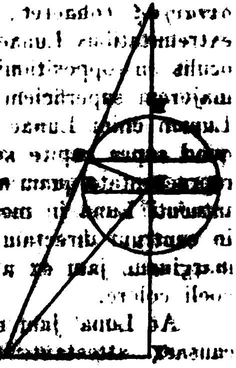
[illegible] De [illegible], [illegible] in illustratio [illegible] [illegible] accedit namque, quod ex illa parte [illegible] deliberatura, circulus illuminationis [illegible] circulum visionis longius adeoque [illegible] distat quam circulus maximus [illegible] A B stribantur circuli maximi [illegible] tangatque dextras circulorum partes [illegible] Rursum autem dextram Solis et sinistram [illegible] secta DE, reliquas partes [illegible] Quicquid igitur est inter E, F [illegible] hemisphaerio collustratae. Dicatur [illegible] connectantur EF, et OH [illegible] minores. Quicquid igitur [illegible] [illegible] Solis [illegible] [illegible] Quicquid [illegible]

Fig. 89.



[illegible] ideo ut Vitellio lib. IV. pr. 77. [illegible] sublatam in gressum umbram [illegible] Punct. HR, in eo RS circulus illuminatus [illegible] Solis centro in linea NE vero [illegible] marginem, qui in S oppositum [illegible] arcus [illegible] Cum [illegible] circulo illi [illegible] pars 31' 20" [illegible]

Fig. 90.



[illegible] horizontem [illegible] Nihil [illegible] 18' 20". Qualium ergo [illegible] est 186. Apponatur ad [illegible]

[illegible] magnum disci apparentis circumferentiam: [illegible]
tionis est ratio: supra vero numero 5. [illegible]
corpus spectatur in duodecim partes aequales [illegible]
partem videri a partibus anguli medii, [illegible]
ergo et angulus illustrationis seu lux ipsa in [illegible]
partes, tantundem igitur lucis respondebit [illegible]
magnis, quantum intermediis angustis, quam [illegible]
mitatibus et obliquius incidet. Denique cum [illegible]
συνεχεσι medium occupet, medium itaque [illegible]
(ut) Ego vero nihil his motior rationibus, [illegible]
συναγεσιν attinet, illa sic totam Lunam occupat [illegible]
praecisa concedatur oppositio sine tenebris, [illegible]
diametrum: in oppositionibus vero non solidis [illegible]
συναγεσι cohaeret, parum ab illa differt [illegible]
extremitatibus Lunae spargitur, at vicinius [illegible]
oculis in oppositionibus quidem [illegible]
majorem superficiem distribuitur. [illegible]
Lumen enim Lunae plenae in obscurum [illegible]
quod supra capite secundo deteriqui, [illegible]
repraesentat, quam medium propter [illegible]
intuetur Luna in medio [illegible]
in [illegible] directum [illegible]
marginem, jam ex altera [illegible]
coeli colore.

At Luna jam decrescens [illegible]
cessant attestante [illegible]
curam seu gibbum [illegible]

[illegible] Luna [illegible] [illegible] Lunam inspicia, [illegible] [illegible] recta in [illegible] centrum [illegible] [illegible] videri planum discum, [illegible] [illegible] Planum igitur imaginarium [illegible] [illegible] dictum. Jam [illegible] quando conus plano secatur, quod [illegible] positum, sic ut sectio [illegible] in superficie deinitur [illegible] Hac itaque conditione impleta [illegible] planum imaginarium [illegible] perpen- [illegible] Lunam, quoquam erit parallelum circulo [illegible] conjunctione vel oppositione Lunae cum [illegible] seu recta ex oculo in centrum [illegible] oculoque. Et tunc non videtur [illegible] Luna, sed dignoscitur circulus [illegible] per eam centrum et oculum [illegible] perpendicularis: [illegible] discoeatur [illegible] ad [illegible] perpendicularis [illegible] Lunae [illegible] Lunae falcatae, gibbosae [illegible] demonstrandum.

[illegible] Omni posset, perfectae ellipsis [illegible] corpus [illegible] (Vitellio [illegible] quod [illegible] circulum obliquo [illegible] [illegible] Lunae [illegible] Vitellio [illegible] [illegible] Primum, enim, [illegible] [illegible] No. 3

[illegible] proportio fit major partis lucidae [illegible] lunae maximae FAGH, [illegible] rectus per centrum [illegible]

et lucidae partis, quae AC [illegible] visionis minor ex eodem centro, ut [illegible] ICHD, obscura ICHB. Cum [illegible] aequalia AB, DE sint ablata [illegible] portio major erit. [illegible] Haec quidem ad speciem contra bisectionem [illegible] latitudo AB respectu BC plane sit insensibilis, [illegible] proportio insensibiliter alia. Sed aut proportio [illegible] potest a proportione aequalitatis. Altera enim [illegible] donat. Quare tuto contemni potest. Atque hac [illegible] hac nos suspicione liberatos esse [illegible]

Supervacaneum est hic agricolarum [illegible] habitudine; quae semper a Sole [illegible] distinguatur [illegible]

[illegible]

De Lunae [illegible]

[illegible]

[illegible] gibbi [illegible] Hoc hac [illegible] cum [illegible] magnia [illegible] emphasis [illegible] de hac Lunae facie opinione, aliquas [illegible] Vitellionis maxime probat, quem Lunam [illegible] alibi partibus aliter: quae vero nobis [illegible] partes, quibus Sol parum lumine infus[illegible] [illegible] et Luna videntur, etiam cum totum [illegible] corporis. Luna enim transire medium Solis [illegible] Verum ut apparet, Vitellio non [illegible] diligenter opinionem, cui de hac phase [illegible] Luna videri queat parte a Sole aversa [illegible] Itaque et nos infra demonstrationem [illegible] libenter hac opinione, quae [illegible] maxime non repugnantibus his [illegible] Plutarchus ex illo [illegible] opinionem oportere corpus [illegible] profectum dicitur. Id facile patet [illegible] alia genera non, quemque quo [illegible] radiorum. Nec ita multis [illegible] et a terrenis ad lunaria angu[illegible] [illegible] mentor pancorum millionum [illegible] debilitat ejus radios, ut umbra [illegible] ut infra dicetur, duplicata hoc [illegible] protegat: non ergo majorem [illegible] quingenta millia Germanica [illegible] (lunae) transire, quae [illegible] transire, et in quibus [illegible] et festivissimam dignam [illegible]

montis umbram; subtendit igitur umbra montis [illegible] rium altitudo demum 1/4 umbrae addit, quorum [illegible] dimetiente. Quare si quid irregulare in particulari [illegible] rit, id ab ipso Lunae corpore necesse est originem [illegible]

Anno 1599. nocte inter 9. et 10. Februarii [illegible] lum pulcherrimum, deliquium Lunae sum contemplatus [illegible] instrumentis; non tamen vel ea quae nudis oculis [illegible] gessi. Mane post horam tertiam urbis sic Luna se [illegible] ut in istam faciei medium perpendicularis ex corde [illegible]

Erat in illam plagam inclinata facies Lunae, [illegible] cujus dextra auris latet. Id refer ad ea, quae [illegible] Lunae dixi. Nam hoc in omni plenilunio fit, [illegible] Lunae faciem semper ad Terram respicere. Videbatur [illegible] quid supra oculum dextrum, qui nobis e regione [illegible] quasi extremo circulo aliquid ad rotunditatem deesset [illegible]

Cum sonarent tres quadrantes in quartam, [illegible] tium: dubitabatur tamen, diminutio circuli esset [illegible] sicut solent valles primum umbrae involvi? [illegible] quod stabat e regione cordis.

Hora 4. sonante jam bona pars defecerat [illegible] horologium, quae solent saepe sine cura [illegible] Jovis [illegible] ex comparatione meae [illegible] minor fenestrae super meum oculum. Itaque [illegible] crescere 6'. Et quadrante post quartam jam [illegible] eadem horizontalis esse potuit. Tunc non [illegible]

[illegible]

[illegible] Sole verticibus jam diu incumbente, [illegible] ut non absurde locus ille gentium [illegible] fortunatorum creditus sit. [illegible] dixisset esse Insulam, quam maledicta [illegible] Solis in profundum transmittunt, quod [illegible] solent Barrenae, repercutiunt. Verba [illegible] magnus, ita quantum Insulae quae [illegible] spiriam, aquam aut aliam caliginem [illegible] non contingit, sed eas desinam reliquiamque [illegible] Insulae; cui hac in parte non assentior, [illegible] Insulae partes lucidae, maris credi, [illegible] insulae. Etenim hoc ab opticis de- [illegible] est superficies aquae pluri- [illegible] opponenter, puto ob aequabilitatem [illegible] et adaptationem minutarum partium, [illegible] quae terrae quorum illud effeit, [illegible] in omnes plagas sint aptae, hoc [illegible] nisi ex signo hoc magia alba; [illegible] (Cap. I, 30), ut et [illegible] 1601, cum in Styriam redituum [illegible] insignis altitudinis Sobekel distans [illegible] ex binis montibus opposita libella [illegible] vertices alterius montis, qui [illegible] quinque turrium Argentinensium [illegible] cetera inferiora regio- [illegible] non aliam posuit opinionem [illegible] quae fecerunt de mani- [illegible] tota esse incredibili [illegible] mihi fecit interes- [illegible] Sole illustrata [illegible]

10. De illustratione mutua Lunae [illegible]

Satis est in confesso, principale Lunae lumen [illegible] modis et variatatibus dictum est hactenus [illegible] Lunae exiguam aliquam propriam lucem [illegible] Primum quod in totalibus defectibus Lunae nihil [illegible] quidem satis clarus. Deinde quod in totalibus Solis [illegible] num tota facie clare cernatur. Tertio quod in novilunio [illegible] et amplius; adeoque et in quadraturis Lunae non [illegible] plane tota facie rotunda cernitur. Verum nulla [illegible] De lumine in defectu Lunae residuo dicetur infra cap. [illegible] Lunae proprium. De novae vero et Solem tegentis [illegible] dicendum. Quod autem aliquando Luna nihilominus [illegible] mortalibus evipuisset, auctoribus Vitellione et [illegible] ex eo phaenomeno in causa reddendae [illegible] nisi de hac re certi fuissent. Attendant qui [illegible] incolunt et meridionalem Galliae partem [illegible] inquam in hanc rem et Lunae fidem [illegible] anni die 2/12. Octobris indice Tychonis Brahe [illegible] Soli centraliter et dictis regionibus [illegible] Lunae in Sole eclipsibus minorem [illegible] [illegible] Progymnasmatum primum [illegible] [illegible] Solis eclipsibus [illegible]

[illegible] margine convellatur, alii causae gratia, causae opus esse putabit, aliunde causas [illegible]

[illegible] totam conspicuum in Luna nascente [illegible] illuminationis, qui ideo totus cernatur, quod [illegible] diametro Solis. Haec ratio plane [illegible] tantum in margine, sed in toto cor[illegible]ere debet, imo et in quadraturis nonnihil [illegible] post Dichotomiam latet.

[illegible] causam hujus lucis Veneri [illegible] illustrare. At semper Luna cres[illegible] non semper est ad illud latus objecta. [illegible] altior est. Quare etsi fortasse con[illegible] illustrandum fortius, at ad Lunae [illegible] lucem radius Veneris non pertingit, [illegible] non nego, fieri aliquando, ut [illegible] ipsi oppositis sideribus factam [illegible]

[illegible] praecepter meus primus, quod etiam, [illegible] ante 12 annos docuit, et anno [illegible] 21, 22, 23, publice explicavit. [illegible] est tradenda doctrina. Sic [illegible] [illegible] per totum corpus diffusum [illegible] diurnae lucis, quae vel reflexa [illegible] adhuc claro die [illegible] vel [illegible] [illegible] acutissimam visus [illegible]

minimam attenuationem vel non vel aequarique [illegible]
nant igitur alias causas quaerere, cum [illegible]
credere non potest, tantam esse vim luminis, quod [illegible]
catur, is in considerationem trahat experimentum [illegible]
pesani: ubi de tam exigua portione Terrae, [illegible]
habebat in diametro, et lineis quidem nequaquam [illegible]
oblique vel plane obliquissime ab extremis partibus [illegible]
luminis suarum in montem vibrata fuit. Et quid [illegible]
tota terrae marisque facie confertim et perpendicu[illegible]
hoc quotidie maxime aestivis diebus in oculos in[illegible]
existat, Sole Terras rectiori angulo feriente. Nam [illegible]
culariter Solis radiis undique in aërem omnibus [illegible]
splendorem, ut oculi conniveant. Desinant [illegible]
Plutarcho, quod Terram is in coelum intulerit [illegible]
rastra esse tradat: cum videant certissimis [illegible]
lacie consortium, qualem quidem Luna obtin[illegible]
Tandem vero, ubi Plutarchus, ubi Maestlinus [illegible]
fuerint accepti: tum bene Aristarchus [illegible]
rare incipiat.

Cornelius Gemma Cosmocritices [illegible]
libello de gloria Atheniensium, in quo [illegible]
[illegible] Graeci apud Fumagallum [illegible]
[illegible] urbem, sed insulam [illegible] Aristarchi [illegible]
[illegible]

[illegible] primas apperticias astronomiae [illegible] Purbachio per causas Lunae visionem [illegible] sufficienter tradit. Inter causas has collo[illegible] vel breves exortus et occasus signi, in quo [illegible] Lunam boream vel austrinam, magnam vel [illegible] in periodo sua: quibus addit prolixius [illegible] cum Purbachius dixisset, Lunam eodem [illegible] quod cum antiquitate congruit, qui noctilucae esse solitis, et cum Plinii affirmatio, [illegible] eodem die et mane ante Solem et [illegible] causis ad hoc pronunciatum accommodat experientiam provocat. Ego, ne nihil hic [illegible] comprehendi non possit. Vere enim [illegible] multum afferre impedimenti. [illegible] parus et defaecatus sit, ut hyeme, [illegible] consistat, superior magna pars [illegible] Lunam in ipso conjunctionis [illegible] aliquem limitem alterum per[illegible] a Sole abesse potest, quare vix sep[illegible] secundi, atque id ipsum ut in margines [illegible] apparet: quod quidem Reinholdus [illegible] totus Lunae discus integro Terrae [illegible] conditione loci et videntis aeris [illegible] cum saepe aeris horizonti cir[illegible] enim est, quae opici de pro[illegible] verbis inhaerentes ex illis consequi [illegible] magis [illegible] ob id, quod Lunae [illegible] judicio antecedunt [illegible] Luna [illegible] : [illegible]

Anno 1598. 21. 31. Julii mane Gratii vidit [illegible] rissime, ut spes esset et postridie visum iri [illegible] occupabant. Erat Sol circa 7° ♌.

Anno 1603. 25. Aug. vel 4. Sept. Sole in [illegible] tamen dejecta in limitem austrinum visa [illegible]

Anno 1603, 4. 14. Martii vesperi Lunam [illegible] necesse videretur videri et pridie potuisse, nisi [illegible] nubilum. Fuit Sol hora 6. in 23° 49′ ♓, Luna [illegible] Solem et visum locum Lunae in circulo magno [illegible]

At Venerem Tycho Brahe Anno 1587. [illegible] dinem in boream excurrisset, vidit die 21. Febr. [illegible] et 24. Febr. mane ante Solis ortum, cum [illegible] Solem esset [illegible]. Nec inepte ad Lunam et Venerem [illegible] pora accommodari posset IV, 14. Vitellionis [illegible] oribus profundior aër objectus caerulea [illegible] sedulo imitantur. Ita Lunae et Veneri [illegible] aetherea substantia objicitur, quod radis [illegible] tius cernuntur quam superiora corpora, radius [illegible] demissis. Est enim et aetheri sua [illegible] Venus tam parva sit et tamen propa [illegible] est de Lunae est longe comu[illegible]. Nec [illegible] sublimen, interdum Solis lumen habetur [illegible] anno 1542. inter conflictum Caroli V. [illegible] tum, vel insignem pestilentem [illegible]

[illegible] non venire, ut Veneris stella de [illegible] Sole inclinatis, et extincta [illegible] illa [illegible] rationibus et experimentis verisimile [illegible] Solem videri posse.

[illegible] cæterorum siderum.

[illegible] et Vitellio lib. IV. prop. 77. stellis [illegible] medium, inde adeo sequi, ut [illegible] non ut Luna dimidiatæ apparent, [illegible] per quam figura discerni nequeat. [illegible] distinct esse, sed transire per cor- [illegible] Querum sententia imbecillior est [illegible] de Luna disseremus, si per refractionem [illegible] tantummodo in diametralem à Sole [illegible] ad eas lucidissimos suos radios projicient: [illegible] quo minus in loco expuntium [illegible] verse. Itaque prope Solem latet [illegible] et Ptolemæi regulas de esper- [illegible] Vitellionem vero, si nullus reliquorum [illegible] est refutare. Nam quia hæc stella [illegible] inferior (quæ de re nemo quod dubitet, [illegible] hisce ambiguitatem hodie in duo [illegible] Brahe, adeo ut alterius en hisce [illegible] atque ano pro affirmant, Veneris [illegible] lumen Veneris ut Lunæ, sunt [illegible] vero videri, Venere ad [illegible] dabat. Die naque latet [illegible] alta, lumen debili spargit, [illegible] magis delendit, hæc efficiter [illegible] denique lumen claritatis ved [illegible] quoad instar stagnæ stellæ [illegible] [illegible] de Astrologia [illegible] addit, [illegible]

minimum Saturno. Deinde thesi 29. idem studio [illegible] demonstravi, cum lux planetarum sit colorata, [illegible] sint et coloris essentiales causae haereant in [illegible] quam quisque planeta virtutem ostendat in effectu, [illegible] dispositionem in corpore habeat. Vide prop. 15. [illegible] planetarum cum aliquibus comparavi corporibus [illegible] fides fortiter illustretur, colorem reddi Martis, [illegible] plumbea vel alba, Saturni, si flava, Veneris, si [illegible] jam et de luce propria videtur sentiendum, et si [illegible] carbo, rubet, si ex rubino multa lux pellucet; [illegible] tuetur; si clarissimum et pellucidissimum sit, [illegible] tima lux, Veneris resplendescet florida luxuries; [illegible] studio admodum subtili, Mercurii; ita ex crustolo [illegible] Omnino vero credibile est, [illegible] nimis atque Solem: et consentit, quae de [illegible] vel aspectus ipse: si paulo diligentius [illegible] plane sincerum est. Apparet ex Saturni [illegible] purpura, ex Jovis gratissimo fulgore [illegible] id clarissime in Venere. Sic Cauda et Arcturi [illegible] successive colores iridis induunt. Et [illegible] adhibui, qui quoties virorum amicum existimarem [illegible] caverent. Convenimus in unum, quod [illegible] significabat. Haec [illegible] [illegible] qui haec omnia putant ab oculi fallacia, [illegible] omnium siderum aequa [illegible] [illegible] Cur [illegible] exhibet chrotarum, [illegible] [illegible] crystallinum [illegible] [illegible] Et [illegible]

[illegible] et utraque per eandem fenestram radiarent, [illegible] evidenti proportione, sic ut Luna quidem [illegible] quia et majus ea corpus Lunae, [illegible] marginis, ubi concurrebant radii utriusque, [illegible] conjecturam conjiciebam claritatis super- [illegible] et quae ab utraque illuminabatur. [illegible] radius Veneris plurimum, at Lunae [illegible] superior undulatio fuerunt a reali Veneris [illegible] ex aëre jam in ventum transeunte.

[illegible] videram, quamvis physicam magis quam [illegible] injeci, quod non impossibile existi- [illegible] stellarum azimutha et altitudinem per ana- [illegible] eodi eumque anno 1601. mense Decembri [illegible] per eandem fenestram in eodem [illegible] studiosus observationum coelestium adhi- [illegible] plana in quae despiciatur. Semper [illegible] proclivieres sunt oculi, quam ad

[illegible] Cometarum lumine.

[illegible] facies accenderet, satis ostenderunt per [illegible] cometarum barbas semper in plagam a [illegible] conversiti aut immanis altitudinis portenta [illegible] capitis occultarent. Exercent tamen [illegible] mediocribus difficultatibus. Nam si a [illegible] perrectio in genere arguit et ratio [illegible] candea non praecise Solis oppo- [illegible] sit, cur curvatur in arcum? Desi- [illegible] cepit ejusque impactu reflex- [illegible] materiam esse ad cometae [illegible] monstrum. Si autem [illegible] illuminatum, ut [illegible] Proximum [illegible] caudam capere a Venere [illegible] Nam [illegible] 1577.

inclinatione constabit. Non parallaxis; nam [illegible] ex rectis non potest repraesentare curva. Nos [illegible] monstri confingamus, materiam aetheriam certis [illegible] hoc sidus magis magisque crassam, [illegible] cauda vergit. Atque id quidem si statuerimus, [illegible] illuminatione caudae ipsa respondere. Materia [illegible] erit. Ea vero non a Sole ipso illustrari potest, [illegible] et pura sine coloribus. A Solis vero lucem [illegible] strari poterit, propterea quod per cometae corpus [illegible] pure pellucidum esse convenit et densum admod[illegible] conduplicantur atque etiam colorantur. Quod [illegible] cometarum suam asserere materiam: dicere [illegible] riam, quod et supra feceramus, non plane [illegible] idoneam esse, quae a colorato Solis radio per [illegible] tam propinquo loco tam fortiter pingatur, [illegible] seu splendore posset incurrere. Cetera [illegible] dei caudae dilatatione in fine, fatii vero [illegible] quibusdam cometis aliqui referunt, caudam [illegible] coire indeque tanquam a puncto novam necti caudam [illegible] Nam haec omnia ex globi solidi pellucidi [illegible]

Sequetur igitur etiam illud physicis considera[illegible] quodam humore densiore quam est [illegible] ficus erat capite primo. Non esse vero [illegible] verum; dissolvitur enim paulatim [illegible] tantum [illegible] Tycho Brahe [illegible] vita lapsu, quod cometae bellis [illegible] [illegible] Nam [illegible] solidi sine [illegible]

VII.

[illegible] Terræ.

[illegible] eclipsibus sublinde propius accedimus: [illegible] sunt disputationes de illuminatione et [illegible] cap. VI. Jam de penumbra differimus, [illegible] tertiæ nec plane decisa sit sententia, [illegible] sequentur.

[illegible] figura umbræ.

[illegible] seu metæ figura esse, propterea quod [illegible] Terræ, nihil impedita montibus, rotunda [illegible] Vitellione aliisque probatum. Vide [illegible] 32, vel sequens 33. plane eclipsibus est [illegible] Lunæ luminarium ex Terra fieri [illegible] sunt 31. et 32. videntur a Vitellione [illegible] Lunæ [illegible] nigrior sit umbra invo- [illegible] ex professo trademus.

[illegible] occupabat. Alius splendore candae [illegible] Solis cœtasum, nondum heliace orto [illegible]

[illegible] dethusiæ, concedentur et certi pro- [illegible] ejusmodi. Ex quibus tandem et ceratine [illegible] non inepte extruxeris, non [illegible] in argum, sed quod ex aliis atque [illegible] dispositione hinc longiores inde [illegible] ordinati speciem unius candae [illegible]

[illegible] quia distinus, vulgari optica [illegible] corpus pulcrum cogantur [illegible] dilatentur extremitates [illegible] Solis. Cæterum jam ut [illegible] Solis non transmittat, [illegible] candae [illegible] anno 1596 [illegible] ratioque [illegible] in hastam [illegible] temporum [illegible] et in [illegible]

2. *Παραδοξον* Lunam non obscurari [illegible]

His itaque sic se habentibus, cum inde a [illegible] confesso, deliquia Lunae provenire ex incursu ejus in [illegible] culus etiam super his extructus fundamentis tantum [illegible] deri eventui: summam difficultatem objicere [illegible] quae capite IV. de refractionibus radiorum Solis [illegible] sunt. Nam si radii Solis Terram occidente Sole [illegible] veniant ad nos, transibunt igitur refracto et umbram [illegible] transitus Lunae. Hic nobis nodus solvendus est [illegible] liberentur, neu existat, qui nos [illegible] tionibus vel refractionibus de eclipsi [illegible] cavillari.

Fig. 93.

Centro α, peripatu [illegible] repraesentans, centro β [illegible] et ducantur contingentes [illegible] concurrant cum [illegible] ram umbram Terrae [illegible] At jam Terrae globus [illegible] aëris non omnino est medium [illegible] ris, quare $\beta\alpha$, $\gamma\zeta$ ingressum [illegible] non possunt pervenire [illegible] $\eta\theta$ et impingunt [illegible] impediuntur, quo minus [illegible] illustret minorem [illegible] de ea objicimus [illegible] jicit, quorumdam [illegible] et transitus [illegible] [illegible] Tycho [illegible]

[illegible] faciunt 34′. At quia [illegible] plania est [illegible] aëris portiuncula [illegible] est [illegible] Terrae, idee [illegible] solus est 34′. [illegible] erit [illegible] 34′ et [illegible] est 12′ 48″, [illegible] [illegible] aequat utrumque estque 46′ 48″. [illegible] datur [illegible] 34′ et [illegible] 46′ 48″, et [illegible] est [illegible] utrumque estque 1° 20′ 48″. Detetur [illegible] sitque [illegible], et punctum contactus [illegible] rectangulo dantur anguli, quia [illegible] est quem [illegible] 1° 20′ 48″. Sit tamen [illegible] ad [illegible] semidiametrum Terrae sic [illegible] ad [illegible] [illegible] umbrae prodit non altior a [illegible] [illegible] cum alias [illegible] ex his suppositionibus [illegible] Luna vero cum proxime Terram [illegible] venit, [illegible] diametris superior tran- [illegible] terminata desinit. Haec itaque [illegible] in angulo refractionis maximae [illegible] ubique terrarum ejusdem est magni- [illegible]

[illegible] in non universa doctrina eclip- [illegible] Solis, Lunae et Terrae, adeoque [illegible] fundamento subruto collabitur? [illegible] auribus nos excipite, o vene- [illegible] in vestrum honorem deserere [illegible] stabilitam. Hoc inquam respon- [illegible] venit, lumen Solis Lunae ex- [illegible] medio, de quo infra) ad aëris [illegible] aëris [illegible] lineas [illegible] [illegible] aëris id esse, quod Lunam [illegible] umbra, opaculo [illegible] et [illegible] nobis aequae Soli [illegible] Solis transmittit, sed [illegible] ubi dimidium aequae [illegible] aequae Luna ab [illegible] Solis per aëreum trans- [illegible]

ginatione deceremus, quae ut Solem [illegible]
a δ attolli necesse erit. Hujusmodi quippiam [illegible]
respondeo: vere quidem illum argumentari, sed [illegible]
Nam ex exp. IV, Nro. 6. prop. 11. apparet [illegible]
dimidii miliaris, etiamsi horizontis refractio [illegible]
Terrae semidiametri habet 860. Quare [illegible]
semidiametros computamus, una nobis decedit [illegible]
de 60 semidiametris nobis una decesse, [illegible]
tilitatem adhibuerimus. Quare non est haec min[illegible]
cum aliis, quibus necessario ob causas alias [illegible]

3. De rubore Lunae defuncti

Ne vero quisquam de eo quod dict[illegible]
Solis per aërem admissis et refractis e[illegible]
deficit tota, respiciat diligenter ad eclipsi[illegible]
illustrationem in oculos incurrentem. Neque [illegible]
fecit in gratiam refractionum, ut fabulas [illegible]
logum. Extant veterum sententiae: ad[illegible]
ruber ille sit lumen Lunae proprium. [illegible]
Ptolemaei sic philosophatur. Quod [illegible]
modo Lunam afficit. Cum enim Luna [illegible]
cae et humanis affectionum, quae [illegible]
[illegible] neque determinata sed [illegible]
sit debilius, quod ad nostros [illegible]
[illegible] alio splendidior apparet, ut [illegible]
[illegible] interceptis,
[illegible] rubrum debilior [illegible]

[illegible] libro in defectibus, sed [illegible] ubique [illegible] proprius. Ipse [illegible] hoc [illegible] aliam alium [illegible] : si sub vesperam [illegible] tertiam et supra semissem horae. Si [illegible] ignem colorem edit: a septima hora et [illegible] caeruleum truncumque valdem [illegible] ad propositum. Arabes nobis aliam [illegible] Cardanus in supplemento Almagesti [illegible] propositum ex Alfonso et Linero [illegible] ad [illegible] accommodat, quae Reinholdi traditioni [illegible] varia constitutio regulam non videatur [illegible] hanc, quam objectionem accommodans, [illegible] Lunae dixerit ac mixturam potius luminis [illegible] sentiens, proprium vero nigrum et [illegible] umbrae interspergentibus, astra [illegible] causam ad hunc quidem rubore[illegible] [illegible] ratio habebitur in colo[illegible] negaturus Lunae omne lumen proprium [illegible] Lunae in eclipsibus videtur destituta [illegible] partibus [illegible] Ceterum Vitellio causam in vicinum [illegible] vel debiliores juxta invicem [illegible] Lunae aliud in suo corpore pate[illegible] transiens: nihil itaque haec [illegible] Causa vero plane est [illegible] illustratio Lunae a Solis [illegible] versus axem [illegible]

existeret. Quod vero Gemma addit horam noctis [illegible] ex Ephemeridibus Stadii scribere quam ex observ[illegible] enim hujus eclipseos non longe ab hora post mediam [illegible] apparere potuit, calculo Tychonis ex certissimis exp[illegible]

Memini cum in Würtembergia puer admodum [illegible] vocaber ad contemplationem eclipseos, noctis hora [illegible] rubicunda undiquaque apparuit. Circumstantiae [illegible] potuisse quam quae 31. Januarii anni 1580 vid[illegible] horalem Maestinus in Isagoge paulo minorem [illegible] semidiametrorum: propterea brevissime totam in [illegible] cum ista Frodoardi.

Anno 1588. diei 3. Martii mane in observatio[illegible] ☾ maximae ad horam 2. 58' invento annotatum [illegible] esse lucidiorem, propterea apposita sunt ista verba: [illegible] At id aliquot minutis sequebatur, ut ex hoc [illegible] patet. Hic in una eademque eclipsi Luna rubr[illegible] Lunae proprium lumen esse censuerunt, altera [illegible] induit. Cumque nondum ad medium umbrae [illegible] gibbi ostendit, latiores esse radios Solis in [illegible] occidentalem quam circa orientalem umbrae [illegible]

Similem eclipsin Lunae vidi Gratii anno 1[illegible] [illegible] 9. et 10. Februarii, qua de supra [illegible] Luna jam immergeretur umbrae, [illegible] [illegible] tamen ab juxta tota cernebatur, [illegible] [illegible] a regione lucis ex Sole [illegible] [illegible] scilicet hoc etiam paulatim cedente. [illegible] [illegible] in umbrae caliginosiorem partem [illegible] desinebat in [illegible] rubore, et [illegible] [illegible] coloren [illegible] [illegible]

[illegible] fulgor exiguus corona Solis [illegible] aequaliter hoc certum [illegible] rubor explicabatur, [illegible] lucidum et partem plane [illegible] Lunae phasin excepi. Hora [illegible] apparuit, consumtis in egressu amplius [illegible] observationi Bracheanae Wandesbergi habitus [illegible] aliud dici potest, quam extitisse refractionem [illegible] adeo vadiis, cujus refractionis modulus [illegible] fecerit. Nam si sidera Solem et [illegible] ejus discum aequaliter ab objectum

[illegible] ab et in praecedentibus in umbra ipsius [illegible] in umbra aëris, quae refractos Solis [illegible] immanis utriusque umbrae, puro [illegible] deficientis.

[illegible] Terrae umbra, consentaneam [illegible] anno 1589, die 3. Martii Malpronaea [illegible] umbrae versaretur vix oculis per [illegible] sum, cum recordarer eius [illegible] cum instrumentis Tychonicis ejus a [illegible] ejus margines cernebant, ut [illegible] interitum exhibere viderentur circa [illegible] sit de Lunae proprio [illegible] dicere. Quin potius hic [illegible] quod supra de rubore Lunae [illegible] modum. Jam [illegible] verba [illegible]

qua si sub dio fueris, inter nivem et carbonem [illegible] neutrum discernere. Adeo in densissima [illegible] nullum efficit) nunquam evenit, ut omnes omnino [illegible] nisive illustretur de his terrestribus rebus. Quis [illegible] potius in illa pura aura aetheria, qua Luna [illegible] Terrae semidiametris supra hunc nostrum caliginosum [illegible] quae jam vehementer attenuata, idem sidere in [illegible] Terrae haerentem, quod hic possunt in montes, in [illegible] bunt? Ut taceam nonnulloa radios a Sole [illegible] etiam umbrae pertingere. Quare tam luculentis [illegible] tortibus, nihil est opus Lunae proprium [illegible]

5. Problema: Refractiones in longissimo dist[illegible] metiri ex observatione eclipsium.

Supra Nro. 2. ex horizontali refractione [illegible] ab extremis Solis radiis refractis Terrae [illegible] semidiametros Terrae longam; dictumque est, L[illegible] 11 semidiametris superius transire, quo modo [illegible] nunquam contingeret. At Nro. 3. cum ratio [illegible] esse tunc allata, Lunaris corporis parte [illegible] maximam obscurandam. Quo loco ne [illegible] verum illud consideraret, non omnibus [illegible] supra c. IV. n. 8. satis est declaratum. [illegible] inventae sunt minores. Deinde [illegible]

[illegible] a superioribus partibus corporis [illegible] in Terram impingent; cum [illegible] nec eam refractione facta [illegible] pq, qs, $\sigma\chi$, $\chi\tau$, donec se mutuo [illegible] τ, τ et $\sigma\tau$ in υ, υ junctis. Est igitur [illegible] $\tau\upsilon\sigma\tau$, in qua circularis [illegible] a Terra 45 semidiametrorum. [illegible] in aliam declinans circulus, [illegible] pq, in qua lux Solis refracta [illegible] circulo P, Q, est terrarum regio [illegible] in qua terrarum refracta lux Solis, [illegible] per istorum regionem. Utrum autem [illegible] quae fere semper septentrionalis [illegible] restat semper utrique excavata [illegible] per quam multo latius [illegible] 45 semidiametris Terrae, et in [illegible] locus, quem Lata [illegible] supra cap. IV. [illegible] (posito $\delta\varepsilon\nu\tau\varepsilon\rho\alpha$ $\lambda\alpha\tau\iota\tau\upsilon\delta o$ [illegible] qui [illegible] 1° 1' 30" [illegible] [illegible] 8' (IV, 12). [illegible] 270) 12' 43" et ab revolutione [illegible] 67° 44' 12", qui est [illegible] Quare [illegible] revolutionis [illegible] 18' 46". Hinc [illegible] Rector 25° [illegible] [illegible] 42' [illegible] [illegible] 59

supra probatum est, 43 semidiametros elevari [illegible] semidiametris, z, v vero multo plus 70 semidiam[illegible] illuminata refractis Solis radiis, Lunaque inter dictas [illegible] altitudines 54 et 60 semidiametrorum, quod testatur [illegible] quod in umbra aëris versans nihilominus illumin[illegible]

Rursum cum sxu mera umbra terminetur [illegible] distantia, Luna itaque per meram umbram non [illegible] transit, et tamen cum sxu (si intelligatur jam regio [illegible] Solis etiam refracte lucentis) terminetur apice [illegible] distantia, Luna igitur, quae altius transit, tr[illegible] (in secundo significatu sumtum), ita ut in principio [illegible] totius tamen Solis aspectu refracte fruatur; at ubi in [illegible] incidit, non amplius quidem toto Solis fruetur, [illegible] portiuncula. Hinc omnino consentaneum est, quod [illegible] colores iridis interdum in Luna videri. Nam [illegible] est, ubi particula de Sole refracte lucentis [illegible] tatur, colores alium post alium oriri [illegible] corpore luxerit. Vides igitur omnium fere quae [illegible] consensum; quem qui per calumniam convellere [illegible]

Restat scrupulus unicus [illegible]

neque quis contentus esse velit: ut dicatur, [illegible]
refracte lucentis parte carnisae. *)

Ut autem et ostendatur, quibus Terrarum [illegible]
investigatae obveniant, sic agamus. [illegible]
Urseitorgum accommodatae, coepisse Lunam [illegible]
7. 50'. Ego vero cum primum jam [illegible]
paulo minus auctam vidi, fuerit igitur ita hora 7. 52'
sunt 127 circiter. Tot gradibus versus occidentem
in regione Jucatanae Americae. Est autem Sol in
declinatione 13° 47' sept. Posito ergo altero [illegible]
diametro et parallelis intersectione, altero [illegible]
metiatur, circulus scribatur Illuminationis [illegible]
Is circulus aequatorem Terrae secabit versus occidentem
neam et insulas Salomonis in mare Asiae versus
Africanae sub ipsum occidentalis [illegible]
vero versus austrum in mediterraneum Magellanicum
versus septentrionem polo [illegible]
liberna Batavorum [illegible]
oriretur 18° ♓ circiter hinc ex tabula [illegible]
et ecliptica [illegible]

Fig. 98. ZXY [illegible]
18° ♓ [illegible]
nabat vero [illegible]
est, etiam circiter [illegible]
Ergo quoque [illegible]
negato 27° [illegible]
ticam [illegible]
Sabaudiae et Guinea novi [illegible]

[illegible] nostri seculi Hipparchus, [illegible]
[illegible] oculis [illegible]
[illegible] illa in oppositione [illegible]
[illegible] denique justus [illegible] de-
[illegible] professus est. [illegible]
[illegible] diametrum, quam in opposita
[illegible] margines [illegible] optice [illegible]
[illegible] hoc universale esset, tabulis
[illegible] peculiarem exhibuit. Et cum anno 1600.
[illegible] visam Clavio anno 1560. totalem
[illegible] nocturnas (vid. not. 76. 77.), nec
[illegible] quantumvis [illegible] lega-
[illegible] hac semidiametrorum tabella, [illegible]
[illegible] post mortem Tychonis
[illegible] Progymnasmatis [illegible] facta est.
[illegible] primum hoc vel [illegible]
[illegible] Hoc [illegible]
[illegible] visu acutissime et [illegible]
[illegible] in [illegible]
[illegible]

cepti aliqui in hanc opinionem induci possint, quasi L[illegible] sit. Et nos infra docebimus hoc artificio (discre[illegible] [illegible] inire rationem, quantitates eclipsium [illegible] plenum fieri, si recte administretur artificium [illegible] quam quantam exhibet. Tycho [illegible] Hic ita praemissis demonstrandum nobis est [illegible] tantam esse diametrum Lunae, ut Solem [illegible] aliquando profunda caligine involverit [illegible] quibus contingere possit, ut interdum [illegible] Sol tamen praeminere videatur circumcirca [illegible]

2. Exempla ex historiis, quod Lunae [illegible] intulerit.

Umbram Lunae conicam esse, propterea quod [illegible] rotunda, eademque minor Sole sit [illegible] cap. VII. Num. 4. Negavi umbram conicam [illegible] Quod si diameter Lunae [illegible] sed aequalis, umbrae Lunaris [illegible] tenuissimam [illegible] involvit [illegible] [illegible] Sol [illegible] [illegible]

[illegible] eclipsin Solis. [illegible]

[illegible] detalibus fidis, [illegible]
[illegible] religiosam Lunæ diametri magnitudinem
[illegible] II.
[illegible] ministere interdum tenebris [illegible]
[illegible] probatur. Propterea Plutarchus,
[illegible] non esse pellucidam [illegible]
[illegible] experientiam. [illegible]
[illegible] (inconspicua) de, [illegible]
[illegible] Empedocles, qui etiam evidentia
[illegible] putat, ut calculus [illegible]
[illegible] totam [illegible]

[illegible] proprio.

[illegible] orbis.

[illegible] geometrica. Quæ Empe-
[illegible] in [illegible]
[illegible] quæ Pamenides [illegible]
[illegible] his tenebris [illegible]
[illegible] tolluere [illegible]
[illegible] plane [illegible] impediat, [illegible]
[illegible] plane [illegible]
[illegible] argumentis [illegible]
[illegible] et nulla [illegible]

[illegible] Aristoteles, prae-
[illegible] in [illegible] splendidissimum [illegible]
[illegible]

opinionem, quod de anni magnitudine meditor, [illegible] ditandis, plane necessaria. [illegible]

Dionysius Halicarnasseus lib. II. Aiunt, inquit, [illegible] Solem defecisse et tenebras omnimodas plane [illegible] et in decessu ejusdem factum. Fabula videri possit [illegible] calculus Prutenicus, quamvis non plane certissimae [illegible] certitudine, annum plane eundem, interstitium [illegible] aetate Romuli 55 annorum indicat, quibus duae magnae [illegible] tigerint. Nam etsi prior eclipsis preditur digitorum [illegible] facile tamen fieri potest, ut calculus emendatus [illegible] alterutram totalem prodat.

Herodotus libro I. de bello Lydos inter et [illegible] conserta accidit durante conflictu, ut ex die repente nox [illegible] mutationem Thales Milesius Ionibus praedixit [illegible] annum quo et mutatio ista facta est. Cum autem [illegible] non faciat, erat quippe imperitus astronomiae [illegible] [illegible] aliud fuisse, Plinius non confirmat, qui [illegible] ait primum apud Graecos hanc doctrinam [illegible] Olympiadis 48 anno [illegible] eclipsium [illegible] medio [illegible]

[illegible]

[illegible] Solis in Lunam [illegible] fugit, [illegible]: [illegible] deinde per species Lunae nascentis [illegible] [illegible] modi descriptio infra [illegible] Ludovici [illegible] rursum eclipsis incidisset [illegible] Maestlinus ex Prutenicis invenit, [illegible] Solis [illegible] pars defecit, [illegible] simpliciter [illegible] Cum autem [illegible] videtur eadem, quae impulit, ipsum [illegible] Solis in sole novilunio posse contingere [illegible] quod Luna Solari lumini obstet, [illegible] addit, quae vide- [illegible] Lunae [illegible] impletam, ipse [illegible] prodidisse sibi obstantem.

[illegible] Caelio [illegible] per [illegible] dies [illegible] V. Id. Quintiles, caelo [illegible] Luna sub [illegible] Solis [illegible] Forma [illegible] sic, ut credamus totum Solem tegi posse [illegible] et [illegible] eclipsin [illegible] digitorum [illegible] nempe [illegible]

[illegible] quam Hipparchus in libro de [illegible] Timochara [illegible] Clavius [illegible]

C. Mario, C. Flacco Coss. [illegible]
Jul. obs. [illegible]
M. Vipsanio et Fonteio Coss. [illegible]
lib. XIV. Aenubium, Solem, [illegible] repente [illegible]
mania referit, quae irrita fuisse miratur, [illegible]
fuisse defectum ex Plinio colligitur, qui lib. [illegible]
in Armenia animadversum dicit. Dies pri[illegible]

Plutarchus de facie Lunae commentat. [illegible]
Solis cum Luna, qui super fuerit (et ait Ch. 460) [illegible]
diptione [illegible] [illegible]
quam est motus [illegible] sui crepusculo. [illegible]
ligitur et sequentibus. Nam [illegible]
brae in defectibus, neque ab [illegible]
est quod aliquid de Sole superset, [illegible]
diverticula, de quibus postea. Quo [illegible]
vitam, dar etiam quidquid in [illegible]
de [illegible] tenebris [illegible] [illegible]
sia, ut credamus totum Solem tegi posse. [illegible]
[illegible] Julius [illegible]
[illegible] dictos [illegible]

Ammianus Marcellinus lib. XX. de con[illegible]
[illegible]

[illegible] Lunæ quæ eam efferatis [illegible] quando prima vel secunda semissis [illegible] Solis accipiat. Auctor fide [illegible] perfidiam habuit, stellaque omnes exacte cal[illegible] est solitus: quod apparet ex colloquio, quod [illegible] gaudii, ginsque significatis habuit: ridi[illegible] modo dictus Solem sit post horam 9. [illegible] stellas in aere apparent et omnes [illegible] totalem, imo affirmat, quod verbis [illegible] Christi, 10. Calend. Jan. eclipsis Solis facta [illegible] partem apparerent [illegible] Martini. Matutinas namque peculiare [illegible] Lunæ desuper horizontem cen [illegible] Quo modo Lunæ avo meo credo, qui [illegible] (anno videlicet 1530, 29. Martii) [illegible] Item fuerit extincta lux [illegible] calculus Tychonicus non [illegible] appellat, nescio an ex [illegible] historici eclipsin Solis maximam, [illegible] ut stellae per diem [illegible] Lunæ in [illegible]

haberetur, quam ei Tycho negabat, doc
fuit Viennae Austriae, referente Mercatore,
et Paulus Fabricius h. 1. 40' digitos 5 1/2
conjunctionem Uraniburgi monstrat h. 1. 20'
Cornelius Gemma Lovanii initium
h. 1. 28' digitos 7 1/2 fere.[19])

Ex his quidem exemplis hoc ut
secutus accidunt tenebras ex causis
has solas causas, quin ab aëris circumstantia
vel adjuventur, demonstrat inaequalis
si de mera nocte agit quandoque ob
(quod de Ponto testatur Aristoteles),
nocte quoddam crepusculorum lumen
adjumento posset vel tenuissima Solis
et terras, ultra pauca s'n
cana, ad nos porro
charitatis ab aëre prov
Februarii, cum
Olympiadis
totam
tempestas
medio

[illegible] ex altera parte [illegible] centria. Nam fieri potest, ut alter [illegible] a Clavio transcriptum seu memoriae [illegible] intellectu: praesertim si Clavius ab [illegible] ipse dubitans addit, si fortasse [illegible] hos phaenomenon memoriae proditisse, [illegible] haec ipsa auctoris verba. Quare et [illegible] hypotheses quorundam astronomorum [illegible] a Luna apogaea in hunc modum tegi [illegible] Nam quem supra suspicati sumus a Cleo[illegible] [illegible], et a Proclo Diadocho haec [illegible] Ptolemaei sententia. Dixerat [illegible] eo certum haberi, Solis diametrum [illegible] non variari, sed eodem angulo spec[illegible] [illegible] diametro Solis aequalem spectari, [illegible] constructa: at in perigaeo [illegible] ad haec addit: Hoc si verum, non [illegible] in eis quae de revolutionibus [illegible] spectant non totum in anteriore pe[illegible] [illegible] totem), sed in extrema circum[illegible] [illegible] impeditam (tamen [illegible]) [illegible] Ptolemaeo de diametris luminum [illegible] interpretationem: si lumina apogaea [illegible] spectatum [illegible] majori [illegible] deprehendatur. Fieri itaque potest, ut [illegible] [illegible] Ptolemaei [illegible] [illegible]

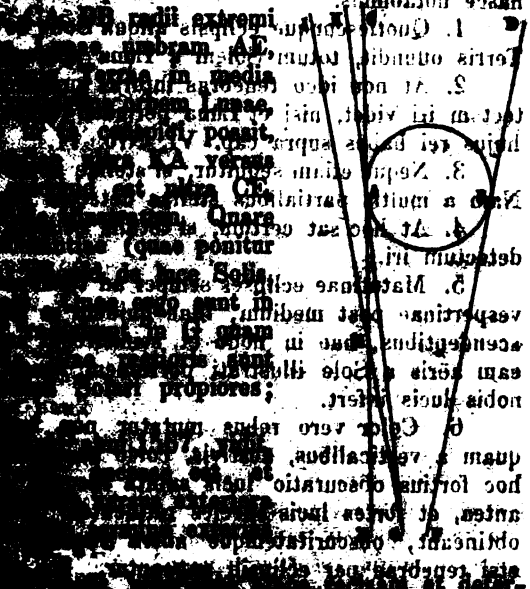
detraxerit, quando ab eclipsi, quam ipse viderat, [illegible]
nectit; Luna, inquit, etiamsi totum aliquando Solem [illegible]
latitudine et tempore caret (regulam ex suo facit [illegible]
in commemoratis exemplis); sed quidam tamen [illegible]
sinens alteram minimeque fieri umbram. Ita plane [illegible]
totus, aër tamen Solem circumstans, quo Soli propior [illegible]
Quare, si crassior fuerit aër, deque illo [illegible]
cono visi Solis intercipitur, fuerit obscuratus [illegible]
videbitur circulari forma. Accedunt alia [illegible]
sane D. Jessenius, cujus cap. V. mentionem feci [illegible]
7. Martii eclipsin Solis sibi in aula [illegible]
Lunam plane cingente; seque eam Solis laborantis [illegible]
allegoria prosecutum. Illa tamen eclipsis in B[illegible]
non potuit, ne quidem per legitimam Lunae [illegible]
dentia. Non potuit igitur Jessenius annulum Solis [illegible]
Lunam circumstare vidit, splendor erat aëris [illegible]

Anno 1603. 8/18 Januarii hora [illegible]
obstruente pila turris, nihilominus orbis [illegible]
putares esse Lunam per aquam [illegible]
aqua dilutam. Non habuit tamen [illegible]
nubem. Et facile splendor hic ab [illegible]
Simile quid mihi accidit [illegible]
(vergente, cum [illegible]

[illegible]

[illegible] Solem, fari posse [illegible]
[illegible] aliam aetheres substantia, [illegible]
[illegible] densitatis rationem habet, & [illegible]
[illegible] Sole occultato lucem Solarem repraesentare, deposito Solari illustratione, genuinem [illegible] videbatur esse. Id [illegible] potest in hunc [illegible] radii extremi [illegible] umbram AE, [illegible] in media [illegible] Lunae, [illegible] possit, [illegible] KA versus [illegible] CE, [illegible] Quare [illegible] (quae ponitur [illegible] Sole [illegible] propiores;

Fig. 100.



sed rarissime ad hunc effectum usque se prop[illegible] illam penultimo loco allatam causam valere, [illegible] sed in promtuario extare.)

4. Corollaria aliquot de Solis [illegible]

Ut igitur hoc caput non sine fructu [illegible] hasce notabimus.

1. Quotiescunque eclipsis aliqua Solis de [illegible] Terris offundit, totum Solem a Luna absorptum [illegible]

2. At non ideo tenebras futuras prae[illegible] tectam iri videt, nisi et Luna perigaeo vicina, [illegible] hujus rei habes supra cap. VI, Nro. 11.

3. Neque etiam sequitur, si stellae apparuerint [illegible] Nam a multis partialibus stellis detectae [illegible]

4. At hoc sat certum, si totam stellam [illegible] detectam iri.

5. Matutinae eclipses semper ad [illegible] vespertinae post medium, [illegible] ascendentibus, [illegible] in nodo et descendentibus [illegible] eam aëris a Sole illustrari [illegible] nobis lucis infert.

6. Color vero rebus [illegible] non [illegible] quam e vera albedo, [illegible] hoc fortasse obscuratio lucis [illegible] [illegible] lucis [illegible] [illegible] obscuratio [illegible]

[illegible], quae anno 47. Terris incubuisse, cap. VI, [illegible] dilutior fuerit, quam [illegible] stellas omnes praeter Lunam quotidie videmus [illegible] superiores tegentibus, si in suo illas itinere [illegible] fuit, anno 241. ante Christum [illegible] 4. stella Jovis eoi occultavit asellum [illegible]

[illegible] 272. ante Christum [illegible] suppositum [illegible]

[illegible] linea [illegible] Jovem. [illegible]

[illegible]

Mercurii nodi in Tauri et Scorpionis [illegible] sunt, [illegible]que hodie ab [illegible] Solem invehere. Quo minus mirandum, quod in [illegible] ad annum 607. annotatum his verbis: Stella [illegible] in Sole quasi parva macula nigra, tamen [illegible] sideris; quae octoties (ut ego lego barbare, non octo [illegible] [illegible] Sed quando primum intravit [illegible] [illegible]

Auctor astronomiae peritus fuit, quod [illegible] eclipsium, et quod sopulam Solis et Mercurii [illegible] maculam illam esse Mercurium. [illegible] [illegible] [illegible] est. Fuit enim anno 608. [illegible] a Rasellate incoeat). Nam ejus diei meridianus [illegible] culus Prutenicus exhibet locum Solis [illegible] 145° 2' 24", quam latitudinem certam ex [illegible] indicis de [illegible] tum, ne hos duos planetas [illegible] distantes est, [illegible] eodem in Arietis [illegible] tunc fuisse circa initium hujus signi. [illegible]

Nunc igitur non amplius [illegible] pontificem Christianae professionis [illegible] Latinos [illegible] ingressus [illegible] annotatis ab [illegible] Std. [illegible] Martinus Zonicus [illegible] Vitigeni, Tycho Brahe et Copernicus [illegible] V. Nro. 5, p. 266. [illegible] [illegible] Saturnum a Luna [illegible]

[illegible] habita carpentique quaesiunt, sunt [illegible] geometricis domus tectorique [illegible] instrumentis dimetitur [illegible] conicam sectionem tali acta [illegible] per quae linea transit figuramque [illegible] in astronomia, quod [illegible] varias vias sitemque [illegible] quaerimus, quae omnes isti [illegible] adiuvantur: quo obiento astronomi [illegible] stellarum varii ortus temporis [illegible] petunt apotelesmata metunt [illegible] respiciique, prout [illegible] cum stellis coniunctis [illegible] aedificii mundani tres sint regiones [illegible] eliptica sub centrum superficies et [illegible] adscendunt nos occupamus [illegible] quae genito respectu [illegible] respectu [illegible]

[illegible] lapidabil ben estimato

[illegible] quae [illegible] propius [illegible] angulo [illegible] comprehendunt et videbitur [illegible] quinque [illegible] angulorum [illegible] habent superficies [illegible] plenos [illegible]

[illegible] ante ejus quartam partem. Quasi [illegible] materia propria tamen est partis [illegible] [illegible] ille Tycho [illegible] diligentissime [illegible] Deinde [illegible] nec rerum natura [illegible] [illegible] ad stellas fixas [illegible] [illegible] astronomi sibi alias metas [illegible] [illegible] numerarent, quae non ut stellae [illegible] et occasibus subjectae, sed a suis Terrenis [illegible] Eae sunt cujuslibet loci horizontes, quos [illegible] planities efformat, totam sphaeram mundi [illegible] hemisphaeria dividens, et horizontis illius [illegible] cujusque loci quocunque momento temporis [illegible] perpendiculi [illegible], secundum quam et [illegible] recti constituuntur. Hoc pacto [illegible] superficiei, seu arcus visibilis seu anguli [illegible] et a Sole et ab horizonte subjecto [illegible] quam Solis vel stellae [illegible] perpendiculari [illegible] cum libramento ponderum. Sed enim ego [illegible] tire coepi, ut occasio mihi daretur, in quendam [illegible] qui cum ob ingenii felicitatem inter [illegible] cum opificum vulgo ineptias plus quam [illegible] [illegible]. Negabat [illegible]

[illegible] dedit oculos, non tantum [illegible] altonius oculi factum [illegible] visibilium ab octulis [illegible] in certa proportione [illegible] circiter; nulla vero certa viaia fuit, nisi [illegible] per centra humorum et foraminum transit, [illegible] hinc elicitur, ut hae diametri inter videntur, sed tanto magis ad se mutuo annuant, [illegible] Hunc autem, oculis naturalem, [illegible] bipartibus dari utrumque oculum in eodem [illegible] oculo [illegible] eandem videri visionem [illegible] Facultas eadem in utrumque cent[illegible] quae fit, cum etiam ex obliquis [illegible] speciem videatur? Centra oculorum sint [illegible] proposita in D, Dirigentur ad ipsam [illegible] continuatae concurrent in visibili B. [illegible] Centrum ad ipsam [illegible] Fig. 161. [illegible] intersecantque in IK, LM. Et [illegible] AGB super eandem [illegible] angulo [illegible] GBA quam [illegible] F, [illegible] posteriores [illegible] et contorsum [illegible]

vistaqin con saltu quedam commutabit; atque [illegible] autem verba imitati, commutationem visus, [illegible] laxim. Demonstratio pene eadem est, quam [illegible] attuli super problemate Aristotelis de geminatu [illegible] simulque nobis in contemplatione siderum accidat; de [illegible] parallaxin dicant, patescat.

3. De parallaxi quotidiana ob distantiam Terrae a centro.

Et dictum est paulo ante, diametros oculi [illegible] sub incedere, si visus ad siderum aliquod diligenter [illegible] asterorum inclinatione tollitur dignotio distantiae [illegible] ejus respectu diametri mundi. Et si duo sidera [illegible] in eadem linea, visus noster, quamvis ambobus [illegible] remotionem diversam non distinguens, putabit [illegible] Hoc pacto evenit, ut Lunae et nunc [illegible] licetur putemus, nihil adjuvante nos distantia [illegible] visus noster in aestimando situ planetarum [illegible] aberret.

Hunc sensus visus defectum [illegible] sublevat. Haec enim omnino voluptas [illegible] sua, oculos ab his terrenis [illegible] sine instrumenta, diligenter contemplaverit [illegible] distinctio indita, et nobis hanc [illegible] tellectum facit. Propterea [illegible] Lunae proportio, ut quod singularia [illegible] universorum in tota superficie [illegible] atque [illegible]

[illegible] tantia, ante oculo in superficie Terræ con-
[illegible] strinegne anguli dicunt speciali nomine
[illegible] vocant; ut ita parallaxis inspiratur
[illegible] in diametro mundi, ipsa vero per se
[illegible] vel situs causa superficiei comprehen-
[illegible] a vertice D
[illegible] magnus in superficie
[illegible] estimae sphaerae
[illegible] A et eadem recta, quae
[illegible] intermedio sidus
[illegible] Ex A igitur centro
[illegible] rectae in G et
[illegible] centro A distantia AG
[illegible] Astronomi igitur
[illegible] DAG vel arcum DE,
[illegible] arcum distantiae sideris
[illegible] DE, per eu,
[illegible] Deinde inquiunt
[illegible] anguli mensuram
[illegible] centro comparatione
[illegible] distantiae sideris a vertice ex B loco
[illegible] loco est, quia sidus, si in ipsam
[illegible] in superficie H esset, sub vertice loci
[illegible] Nam si H sidus B visus A
[illegible] continuata BH et AH in unum D
[illegible] ex centro BH vero ipsoris ex
[illegible] eodem subtrahatur locus D sumentur
[illegible] argumenti in sidus parallaxes
[illegible] inclinat axisiane pend-
[illegible] G apparetis ex A in B ex
[illegible] DE vel DAF, vel E locus ex B
[illegible] locus ex A centro
[illegible] minori

Quare ex his sequitur, BGA angulum [illegible] parallaxin sideris in G. [illegible]

Æqua ergo parallaxeos diversis est [illegible] manique DE, arcus distantiae versus sidera [illegible] moderantur, ex astronomica doctrina (quod [illegible] et DF arcus distantiae visibilis a vertice instrum[illegible] subtilitate ad id momentum capitur, et in EF p[illegible] jam innotuit AG, proportio situs vel remotionis [illegible] diametri mundi ad AB semidiametrum Telluris. [illegible] parallaxeon Solis et Lunae doctrina cum reliqua [illegible] doctrina eclipsium Solis. Itaque parallaxis [illegible] considerator, varie distribuitur, vel in longitudi[illegible] circulos latitudinis, quo nomine ipse tota [illegible] mine dicuntur: vel distribuitur per sequentia [illegible] parallaxin ascensionis rectae et declinationis, [illegible]

4. Parallaxeon quotidianarum in [illegible] facillima et compendiosissima [illegible]

Parallaxeon doctrina praecipuam [illegible] molestiam, adeoque vel ob hanc [illegible] astronomia. Hoc itaque semper [illegible] [illegible] universos. Ptolemaeus egregi[illegible] [illegible] variationes, quae [illegible] collectis ad plerasque [illegible] [illegible] Hinc [illegible] [illegible] [illegible]

Manentibus enim ceteris et GH [illegible]
A centro Terrae, IK vero visibilem ex B [illegible]
vel K, sic ut spectetur ex B lineis BL, BK [illegible]
Cum ergo AI, AK ponantur aequales, et [illegible]
AKI et omnes hi anguli, cum plano per IK [illegible]
aequales. At hi repraesentant parallaxin latitudinis [illegible]
plano circuli latitudinis. [illegible]

Quarto, quod longitudinis parallaxin [illegible]
Et sit jam CBL rectus, erit et CBI rectus, quia [illegible]
planum recto. Erit igitur ACB parallaxis quae [illegible]
occidente Luna ad visum, eaque in circulo [illegible]
quia CEA rectus (est enim jam C in plano [illegible]
et ACE parallaxis latitudinis, erit ECB longitudinis [illegible]
rectus. Ut autem sinus totus ad sinum [illegible]
ita AB sinus parallaxis totalis in horizonte ad [illegible]
tudinis in horizonte. Sed etiam ut CE ad [illegible]
distantiam Lunae a nonagesimo visibilem quae [illegible]
anguli BCE seu parallaxin longitudinis respondentis [illegible]
gulorum. Igitur, quoad processum, ex hypothesi [illegible]
proportio AC ad AB. Ex altitudine vero [illegible]
mobilis seu tabulam Copernici fol. 42, datur [illegible]
per sinus vel per tabulam Tychonis parallaxeos [illegible]
Et quia AEC rectus ut et AEB, et [illegible]
et EB. Et quia CBE rectus, datur [illegible]
BCE ad quamcunque altitudinem [illegible]
quam EC, operae pretium rursus [illegible]
AC pro EC usurpetur. Rursus [illegible]
maxima. Nam si B sit in M, [illegible]
in F, tunc nulla est parallaxis [illegible]
AIE 45′ 1″. Quare EI vel EC [illegible]
dinis sublimem fenestrae angulo [illegible]
AC [illegible]
CA [illegible]

[illegible] nonagesimi ingressum exceptorum [illegible] nonagesimi ingredienem margine, per [illegible] area exhibet longitudinis [illegible] ad hanc rursum a fronte, par distantia [illegible] nonagesimo ingredere a mar- [illegible] longitudinis parallaxin tui momenti [illegible] dest, cum visus Lunæ locus ex obser- [illegible] cum verus Lunæ locus habetur ex cal- [illegible] proxime, additis vel ablatis parallaxi, [illegible] stabili scrupuli, indeque per locum [illegible] tabula. Quam parum hæc [illegible] obtinent, et quemodo, medendum, [illegible] declinationum, et sic ad motum primum [illegible] quærendæ altitudinis [illegible] eadem, cogitet ipse lector. Expedire [illegible] habet in fronte horizontalem paral-

[illegible] Solis et Terræ, [illegible]

[illegible] mundi Architectus humanum [illegible] cum non sufficeret homini distantia [illegible] Lunæ a Terra (quæ tamen [illegible] Terrarum amplitudo, ita, [illegible] a suo centro evanesceret cum [illegible] altitudinem, ne hi quoque [illegible] amplius parallaxeon genus [illegible] inter homines, cui hæc [illegible] columnæ, æqui superet. [illegible] parallaxin orbis annui [illegible] a mobilitate Telluris ad [illegible] quo vel hanc [illegible] a Copernicanis [illegible]

speculator futurus, in ejus meditullio [illegible] modo ad contemplationem tam [illegible] quin potius in hoc amplissimo ædificio, [illegible] cili sui, circumambulat et spatiatur, ut singula [illegible] intueri et dimetiri possit. Simile quid ars [illegible] inaccessis imitatur. Nisi enim mensor ab [illegible] et utrinque collimet, ad mensuram expetitam [illegible]

In ratione Tychonica sit A Terra, centrum [illegible] rae fixarum. Sidus sit in G, et propertie [illegible] sensibilis. Sint primo A Terra, C Sol, G sidus [illegible] laxis nulla, quia CG et AG, lineae ex Sole et [illegible] cident. Sit jam Sol non in C sed in B, et [illegible] Solis sub fixis. Et quia Sol in B, id punctum [illegible] eccentricitates et apogæa motusque simplices [illegible] ergo ex astronomia, quantus sit angulus DBG [illegible] Terram et lineam ex Sole per sidus; et ad id [illegible] menta innotescat E locus sideris G sub fixis [illegible] habebitur ergo arcus inter D locum Solis et E [illegible] est mensura DAE anguli. Et quia [illegible] B vero extra lineam AG, inclinabuntur [illegible] angulus DBG æqualis angulis BAG, AGB [illegible] parallaxis, rursumque ut prius innotescat [illegible] sideris, vel AG distantiæ Terræ et sideris [illegible] Terræ. Hoc solum est discriminis, [illegible] non mensura anguli BGA vel EGB [illegible] AB est sensibilis et A centrum DE [illegible] DE cujus DE non metietur angulum [illegible] AGB illi æquales. Sed DE [illegible] [illegible] DE non metitur [illegible] [illegible] centrum [illegible]

Capitulum X.

Fundamenta optica.

[illegible]

Ex his sequitur, etsi nos quis in Lunam [illegible] transferat, motusque Lunae sit maxime sensibilis [illegible] postea, nihilominus visum iri Lunam nobiscum [illegible] quaecunque sidera in justa fuerint propinquitate, [illegible] iis etiam motibus putari moveri, qui fuerint [illegible] Quare non habent optici, quod ex suo [illegible] [illegible] dum in Terram domicilium nostrum [illegible]

Et ut hoc etiam obiter addam, triplicis [illegible] exaggeratur. Motus enim, quem Terrae [illegible] forma est, quam rotae in curru in directum euntis [illegible] titur, dein conversione ipsa axis transfertur [illegible] vergit manetque sibi paralleles. Quis hic [illegible] ex eo, quod re vera quies est? [illegible]

Nam quod axis Terrae successu seculorum [illegible] in hunc censum non venit, essetque potius [illegible] liberum pertexere. Astronomi sciunt, hoc ex [illegible] et nodi omnium planetarum transferuntur [illegible] differentia duorum aliorum confessorum motuum [illegible]

At jam multo minus habebunt optici [illegible] ne sensibilem quidem esse celeritatem [illegible] quod pro confesso usurpat, [illegible] medes lib. II. [illegible] [illegible] istos duos motus, qui tardior est, [illegible]

[illegible]

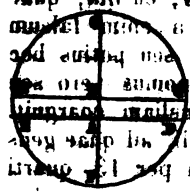
[illegible] Hinc Vitellio lib. [illegible] [illegible] continuata [illegible] ordinata et continuata [illegible] coelo, et illa coeli [illegible] apparent, quam quae sunt in zenith [illegible] appellationes, quibus [illegible] Quo minus mirandi [illegible] Copernicum inter ea, quae in Sacris [illegible] quidem dicuntur, et illa, quae [illegible] deprehenduntur. Non enim falsum [illegible] ; seu potius hoc [illegible] astronomus vero seu [illegible] omnem contumeliam coarguit [illegible] extremarum coeli, ad quae gens [illegible] non vides, illa per 13. quarti [illegible]

[illegible] quod visibilis mora [illegible] linea fiat, atque vel recta [illegible] in linea [illegible] duos potissimum [illegible] alterum epicyclum. Sed [illegible] Copernico et Tychoni planeta [illegible] [illegible]

7 nuet 131. quarti Vitellionis, inæquales inæquales; circa apogæum parvi, planeta per ut æqualis celeritatis in apparebit, ubi arcus apparent minores.

Hæc arcum vel imminutio vel semicirculis, in hunc modum. Sit A centrum eccentrici EGD, ejectus AB in gæum. In punctis B et et DE. Et sit jam planeta per eunce eccentrici arcum atque in HFG, propterea sed in B et E videntur sphæræ duarum, cujus B centrum quam in DEE majorem quam DFE, utriusque circuli non potest idcirco circulum pari [illegible] sed quæsio, quæ argumento partibus circuli? in Responsio, primi hæc [illegible] qui appellatur [illegible] centrum vicinus planetæ septimus [illegible] cursus [illegible] ab [illegible] ut [illegible] circulus [illegible] ut [illegible] quod [illegible] [illegible]

Fig. 101.



At jam propositione 54. [illegible]
[illegible] Nihil ego nisi [illegible]
[illegible] planetae et Terra, visus nostri [illegible]
[illegible] Terrae planetas respicienti) [illegible]
[illegible] (respectu [illegible]
[illegible] fuerit, videbitur [illegible]
[illegible] *) Si [illegible]
[illegible] Terrae [illegible]
[illegible] Terra haec nostra, quamvis vero [illegible]
[illegible] cum moveatur, non potuerunt [illegible]

Propositio 55. videtur [illegible]
[illegible] quidem in centro mundi consistere, ab [illegible]
et Terra volvatur ab ocasu [illegible]
delatis, qui videntur contigui et magis [illegible]
mistae et sparsae apparent stellae [illegible]
ociasum videbuntur moveri [illegible]

Rursum propos. 56. [illegible]
[illegible] ad planetarum corpora [illegible]
[illegible] planetarum corpora magna. Quare [illegible]
[illegible] coelum [illegible] fieri facitur per [illegible]

[illegible]

Capitulum XXI.

De artificiosa observatione [illegible]

Problema I. [illegible]

[illegible] fissuraque utrobique eodem [illegible]
[illegible] regula depressa pavimento [illegible]
[illegible] appensam perpendiculum [illegible]
[illegible] quidem hanc formam, aut [illegible]
[illegible] quadrum [illegible]
[illegible] effecit. [illegible]
[illegible] hoc tuna. In ea [illegible]
[illegible] inhalationis [illegible] plus
[illegible] crenas facias in utraque latitudinis
[illegible] capite regulae, quod erit supra, trans
[illegible] supernas ab inferis distantes. Deinde
[illegible] paulo plus longitudinis, quae
[illegible] crassitie, quae in regulae crenas
[illegible] ex altera longitudinis parte, et fissu-
[illegible] regulae. Axitas regulae crassitiem, quae
[illegible] Itaque tabellae in crenas im-
[illegible] regulae in longum et latum,
[illegible] longitudinem consuugens a medio fa-
[illegible] in quarto sectionis alia erigatur
[illegible] tabellae ducta [illegible] in altera
[illegible] in quibus erat rectorum sectio,
[illegible] latitudine extrema, [illegible] in
[illegible] vero aqua tenuissima bene
[illegible] accent ad rectam et sectione
[illegible] sit hac diametro ad distan-
[illegible] ad [illegible] distantiae (Cap. II, 6).
[illegible] intercisa [illegible]
[illegible] tabellae
[illegible]
[illegible] quantitas
[illegible] sit
[illegible] IC (DI vel AE
[illegible] 20

tabellae, divisam a summo ad partem medie[illegible]
demque utrique ab imo. Aut si placet ut[illegible]
tabellae capitis in medio stylum brevissimum in[illegible]
hunc volubilis aptetur rotula, in qua postrodiem [illegible]
sunt descriptum. Ex altera parte rotulae [illegible]
linea ex centro rotulae exeat, longitudine [illegible]
pertingat et rotulae conversione index in hoc [illegible]
sic constructis dimetire omnia subtilissime, ut [illegible]
ad usum ventum erit, cameli intus nigro iter [illegible]
ut usquam luci pateat ingressus nisi per [illegible]
instrumentum vero sic collocabes, ut ea pars [illegible]
est, cum camali et tabella foris sit extra [illegible]
intra in tenebris positique libere converti. Et sic [illegible]
emittit in aërem, bene circumcirca continuatis [illegible]

Problema II. Diametrum Solis [illegible] quidem per 8. et 9. secundi capitis [illegible] per fenestram quamcunque etiam quadratam [illegible] mathematicam subtilitatem non [illegible] sed [illegible] spectat, ad quam pauca de Sole [illegible] clarioribus intermediorum spectat [illegible] tetilas. Hoc Tychonicis usu venit, dum [illegible] quadrangulo et amplioris quam [illegible] quod Diametrum itaque instrumentum et [illegible] gradibus, altera [illegible]

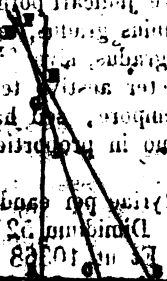
[illegible] ad tangentem anguli, [illegible] diametri radii digitus seu partes [illegible] 140, dimidium 55, [illegible] igitur distantia tabellarum 10368 ad [illegible] arcus 151 30″. Cujus duplum 31′. [illegible] consideratio mense Decembri [illegible] fenestella et regula loco aeque ab[illegible] tabella defecit ab hyberna quantitate. [illegible] 2 partes digitos esset divisa, radius aestivus [illegible] quantum in hac exilitate judicari potuit; [illegible] hoc est $^{11}/_{60}$ unius gradus, ergo [illegible] $^{62}/_{60}$ unius gradus, sive $^{62}/_{60}$ [illegible] minutum. Et diameter aestivo tem[illegible] hyberno tempore, sed haec [illegible] aestivum hyberno in proportione [illegible]

[illegible] Gratii Styriae per eandem [illegible] 105 ½. Dimidium 52 ½. [illegible] relinquit 44½. Et ut 10368 ad [illegible] arcus 14′ 45″, duplum 29′ 30″. [illegible] particulae quarum sunt in [illegible] Diebus antecedentibus coelo cla[illegible] diametri radius ingressus superabat di[illegible] 2 partes. Sublatis 40 de [illegible] arcus 14′ 31″. Sed [illegible] dubitem et spec[illegible] anno 1500 [illegible] anno 1500 [illegible]

bitum, enge gemina eccentricitas [illegible] nio distat 101800, in perigaeo vero [illegible] dem partium, qualium distantia [illegible] ad 66200, sic conversim 31' ad 30' [illegible] Euclidis attinet, id nihil ad tam angustas [illegible]

Problema III. Diametrum Solis [illegible] in Eclipsibus observationibus repeti, cui additum [illegible] gulum sit magister universae matheseos. Sit AB [illegible] distantia, AE paries perpendicularis ad AB in [illegible] Ab summa igitur ejus parte F descendit radius [illegible]

Fig. 199.



ginem et quirgites in C [illegible] ximum. Contra eb [illegible] mum rimae. Ergo dida [illegible] remotissimum. Ut ergo C [illegible] ad tangentem angali [illegible] sumpsi marginis F [illegible] ad totam sinum hujus AE [illegible] qui metitur altitudinem D [illegible] Subtrahitur igitur [illegible] angulus quem [illegible] Hoc et hinc [illegible] aliquo EA [illegible] [illegible] 30' [illegible] 30' [illegible] Extrahitur [illegible] Veteres [illegible]

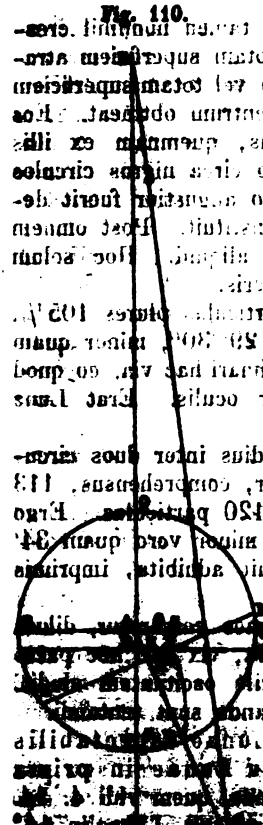
[illegible] enim tamen [illegible] circa[illegible] interceptam superficiem atra[illegible] nigredo vel totam superficiem [illegible] versus centrum obtinuit. Ea[illegible] considerans, quemnam ex illis [illegible] albedo circa nigros circulos [illegible] radio angustior fuerit de[illegible] constituit. Post omnem [illegible] aliquid. Hoc solum [illegible] judicare poteris.

[illegible] particulas plures 105½, [illegible] quam 29′ 30″, minor quam [illegible] aliter justo aestimari hac via, eo quod [illegible] capiantur oculis. Erat Luna [illegible]

[illegible] Pragae radius inter duos circu[illegible] alter, comprehensus, 113 [illegible] 120 particulas. Ergo [illegible] 33′, minor vero quam 34′ [illegible] fuit adhibita, imprimis [illegible] eadem periclito retardatur, dilata [illegible] sic hoc pacto [illegible] facile cognitam eludit. [illegible] observanda sunt tentandi.

[illegible] diametri Lunae Aspectabilis [illegible] Lunae in prima [illegible] quem vidi 4. 14. [illegible] 48½″; Luna in 14° [illegible] Lunae locum et per [illegible] enim comma Lunae [illegible]

Fig. 110.



quam N, multo igitur
Minor vero quam
multo igitur minor
24.
de globo spectatus
Et quoniam
visorius et FG
angulo spectatus
Ergo quoque
igitur dimensio
sensibiliter
Iam et

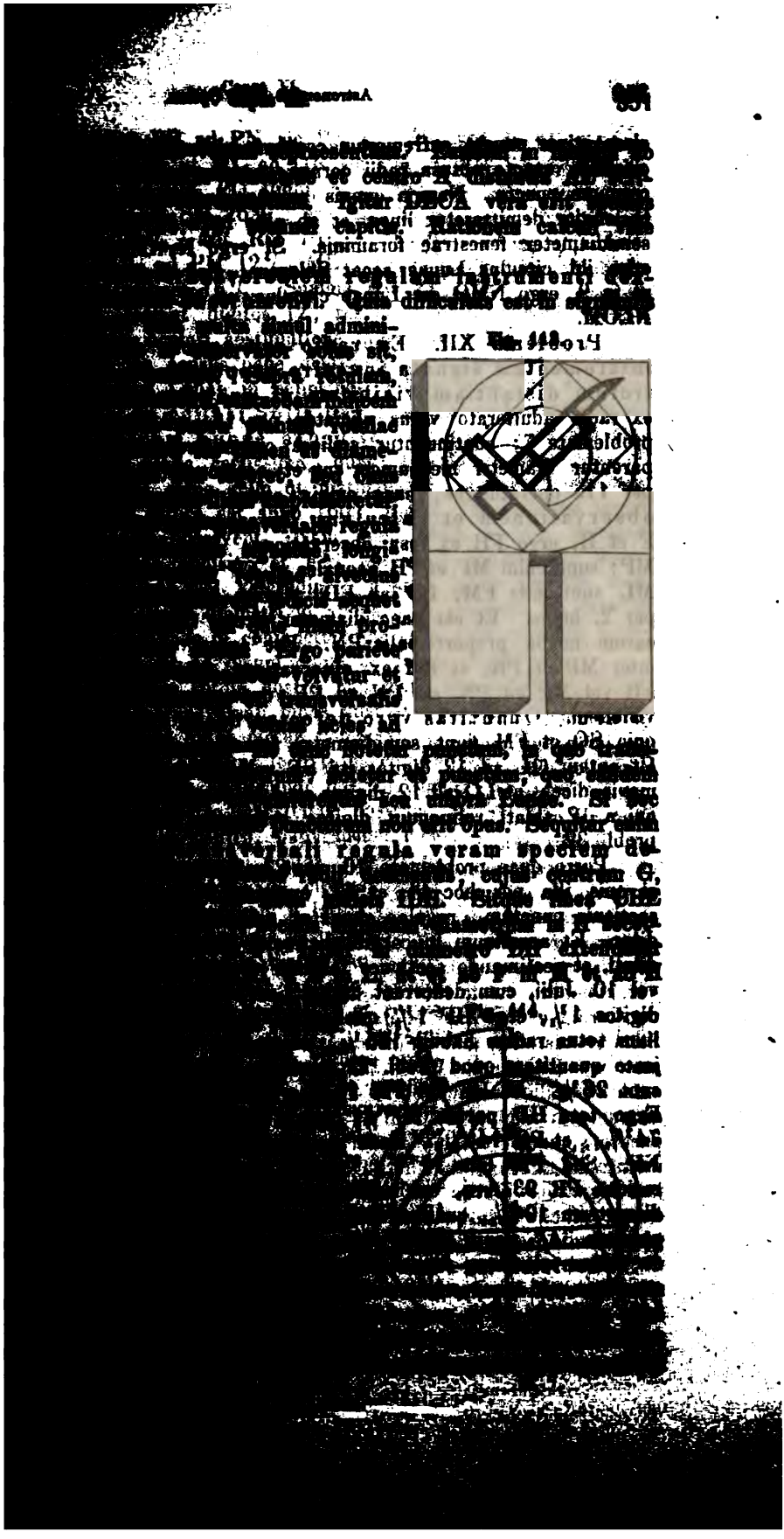
[illegible] a Mo disti [illegible] expeditior, [illegible] Et Hipparchi quidem [illegible] Ptolemaeus [illegible] Sed hoc invenit Luna in aperiendo [illegible] S. Aquilae vesperi hora 8. Gratii vidi [illegible] quadilitere Pleiadum, sic ut non plus [illegible] recedebat. Extremo [illegible] distitit, quanta fuit ejus amplitudo [illegible] quadrilateri longitudo [illegible] longitudine media [illegible] septentrionali videbatur [illegible] S. Luna [illegible] ad [illegible] stabat ad Pleiades [illegible] Pleiades et [illegible] distabat [illegible] Tauri [illegible] quam [illegible] videbatur distantiam [illegible] Pleiadum. Hipparchi comparationes ad [illegible] quod universalis omnium [illegible] 1000. Magis ma- [illegible] Luna [illegible] observatur [illegible]

[illegible] Lunæ in nocte vidit [illegible]
[illegible] tionem facinit [illegible]
[illegible] meum Lunæ diametro [illegible]
[illegible] quam in [illegible]
Non tamen negabim, si quis dubitaverit [illegible]
[illegible] cornibus [illegible] Adeoque [illegible]
observatio divina, instrumentum meum [illegible]
sentiant, quam infra per umbram Lunæ [illegible]
jam nunc concludo, diametrum Lunæ in [illegible]
verò quanta sit, non ita expeditum est ut in [illegible]
duplicem habeat Lunæ æquationem maximam, [illegible]
dictamis 7½, [illegible] quarum physica [illegible]
eccentricitatem postulat, [illegible]
deprehensa, [illegible] hinc [illegible] physicam [illegible]
perigæo vel 33° 29′ vel 34° 0′ [illegible]
vel 33° 15′ vel 32° 35′ [illegible] Vidit [illegible]
87, 88, 91, 92 recensitas, ut plurimum [illegible]
ex tribus hisce hoc est inferta relinquitur [illegible]
observatione anni 1603. 18. 26. Januarii [illegible]
videtur. Sane neque rationes physicæ [illegible]
desiderent. [illegible]

Problema VI. Quantitatem [illegible]
[illegible] Ita [illegible]
[illegible] Hanc [illegible]
et in Lunam. Sic Maestlinus [illegible]
[illegible] gradibus [illegible]
[illegible] Magni [illegible]
[illegible] est. At extra hos [illegible]
[illegible]

Fig. 112.

[illegible]



[illegible] Nunc omnis [illegible] lineæ, et [illegible] N. [illegible] considerantur fenestræ foraminis. Si ergo N, [illegible] ibi circulus Lunæ secat Solarem. Sed et [illegible] ergo NMO et Lunæ circulus et MQ [illegible] NEOM.

Problema XII. Ex radio [illegible] interpunctum signata [illegible] trorum distantiam [illegible] ex radio adulterato [illegible] problemate 7; [illegible] per 11. [illegible] observetur [illegible] et H, ergo FH ex [illegible] MP; [illegible] MF et PH [illegible] ML subtractis FM, [illegible] per 2. [illegible] Et est [illegible] earum media proportionalis PN. Et [illegible] inter MP et PR, et [illegible] ex [illegible] PN ad PR. [illegible] Quantitas vero [illegible] quia SQ et FM [illegible] 12 [illegible] 12 [illegible] 12 [illegible] 12 [illegible] maior [illegible]

[illegible] ad PM, sic PM ad PM, [illegible] ad PD, [illegible] ML, ad QR sic PM ad [illegible] [illegible] MQ, ad PM [illegible] erit ML 62 ⅚. [illegible] erit MQ 70 ⅙. Summa 132 ⅓. [illegible] PM 12 ⅚, ML vero 62 ⅚, et PM, LD [illegible] 16 ⅔. Summa HD 91 ⅔ fere. [illegible] digitos 12, residuum 13 ⅓ efficiet digitos [illegible] quantitatem differt ab 1 ⅓ ? [illegible] ipsum destinerent, cogitavi et de tertia [illegible] in eclipsibus Solis: quae jam sequitur. [illegible] Solis per ante fabrefactas lunas [illegible] expedite et tuto. Ratio omnium [illegible] quae vel sola in causa est, ut [illegible] mathematici, quibus astronomia [illegible] anno 1605. die 2. 12. Octobris prope [illegible] Nam anno 1601. in ipso apogaeo [illegible] potest, ut impedientur aliqui [illegible] solstitiis. Omnes igitur paratos esse [illegible] in apogaeo et perigaeo de vera et [illegible] conditionibus parti quid conferendi pote- [illegible] de causis physicis. [illegible] pappyraceas pro tigillis et indice [illegible] rotundae rotentur, itidem proba- [illegible] compactum, qui ejus diei radium [illegible] transgressalis foliola quadrata, id [illegible] futurum diametrum Lunae dimi- [illegible] contrahit. Ferunt autem retula [illegible] pappyraceum loco [illegible]

Fig. 112.

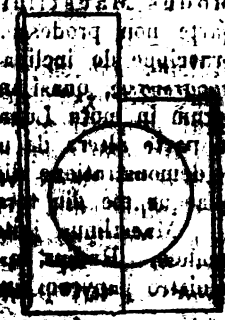
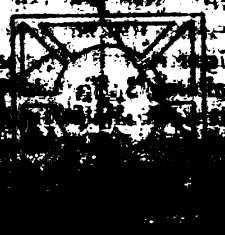


Fig. 113.



mutata, Solis deliquium contemplatus sum in [illegible]
Quantitates circulorum dupla horum (Fig. 115, 116) [illegible]
seram u. pro lunula particularum 37 semidiametro [illegible]
minis efficiunt 45 1/4, sc. ut efficeret 15' seu pro [illegible]
et Sol in apogaeo habet 30' in diametro: Luna [illegible]
partho dicitur aequalis Soli: et Tycho ipse Lunae in [illegible]
diametrum 30' assignat: quae vero de diminutione [illegible]
eclipsibus differat, multis de causis suspecta habe[illegible]
stituta lunula, spectatoribus Braheanis, cum jam [illegible]
viset, apparuit omnibus manifestissime, lunulam [illegible]
majorem umbra, sed adhuc deficere a lateribus [illegible]
tangulet. Itaque major apparens Lunae diameter [illegible]
major futura, si hoc loco epicycli in ⊙ et ☾ [illegible]
majorem propinquitatem: quam ob causam dim[illegible]
vero potest in vertice, quam in horizonte [illegible]
Ceterum lunula unica mihi erat, [illegible]
scilicet modum precedere. Hac autem [illegible]
circuli de medio nonnihil avulsa, uti aequi[illegible]
Tunc itaque inter circumferentias lunulae [illegible]
ficulae propemodum 2. Esset itaque [illegible]
15 1/4'. Ergo diameter apparens 31 1/4. [illegible]
visui tribuam in marginibus umbrae [illegible]
esse ut sit diameter in apogaeo 30 1/4. [illegible]
[illegible] secundum Kepleri doctrinam [illegible]
[illegible] tegere posit. [illegible]
[illegible] in eclipsi [illegible]
[illegible] reliquum [illegible]
[illegible] anno 1695. [illegible]

Problema XIV. [illegible]
Modus Maestlini [illegible]
parte non prodeunt. [illegible]
[illegible] da [illegible]

[illegible] deficiens, hunc bisecet per suam umbram [illegible] AF perpendiculum; erit FAC vel FC [illegible] AF in verticali esse extra centrum [illegible] centra D, E. Nam ponitur bisecans [illegible] in duobus circulis descriptam, cum utrinsque [illegible] per centra illam transire. Ceterum in [illegible] in cujus eclipseos observatione Maestrinus erat et inclinationis vel pene rectus [illegible] tum quidem valuit modus iste et subtilior [illegible] inclinationes intermediae fuissent, [illegible] de cautione admonitus. Nam etsi [illegible] circulum per centra: non tamen FAC [illegible] ad minor est. Quod facile patet, si [illegible] circulorum horum in sphaera, et ex [illegible] verticalem, altera circulum per centra in [illegible] comprehendent angulum cum circulis [illegible]. Demonstrationem et schema et cal[illegible] infra probl. 29.

[illegible] per instrumentum ecliptica[illegible] ut prior tinbatione liberarum manuum [illegible] sub regula in centrum Solis, rotula [illegible] regula vel tangit cornua vel [illegible] index in exteriori circulo gradus [illegible] et altitudo Solis per sectionem [illegible] facto eodem in regula et transtro A ut [illegible] antea non est divisum transtrum et [illegible] Solis. Quodsi loco transregulae [illegible] rotula rursum convertitur donec [illegible] utrique ex segno amplectitur, quod [illegible] retinentia, quae possunt esse loco [illegible] duae et transtri et calculetur [illegible] eadem aequitur et linea [illegible] divisionis circuli in tabulis exterioribus [illegible] ad manum, ubi si nil adsit [illegible]

igitur elliptica erit figura radii, idque fere in omnibus stratarum, dummodo plena fiat intersectio. Nam quantum minimum communicat cono de sua figura, Sol quamvis circulari specie, conum proxime rectum nihilominus alia forte quam circularis sit figura.

Igitur si destituaris instrumento, quod mihi 7. Martii accidit, designa ellipses super papyro prout illas Sol effingat, deserunt, trina vel quadrina summo et in B imo acumine binorum ellipseos AB porrigit calem. Quare mutata positione data erit vertiginem AB. Utilis cipio et fine coniunctis unum fiant. Tota prescise in A consistat lestior.

Fig. 118.

Problema XVII. Ex ellipseos diameto deliquii. Primum mechanice. AB diametrum longiorem, eaque bisecetur in H, circulus, et O vero ut D in AB continuato ad illam partem circulo occurrentem. GF bisecetur in H, tantum longius, discendat ad HB erit ellipsis planum, ellipses plano diametrum longiorem demittitur, rendit

[illegible] Solis a vertice, ita tangens minutorum [illegible] diametri brevioria, in mensura, qua AN, NB, [illegible] ordinatim applicata est justior amplitudo [illegible] est, ut A et B puncta non praecise in [illegible] maxime ut propter moram interveniantem [illegible] discedant, quam C, D puncta expresseris; quo [illegible] vitarentur: ideo per I, 21. conicorum notabis: [illegible] (Apollonius axem figurae vocat) ad breviorem [illegible] transversum ad rectum) sic esse rectangulum [illegible] rectangulum AMB ad quadratum MD. Atque [illegible] DN, si vltimum habent ex consignatione; modo [illegible] locus inter A, B, causa longitudinis instus, [illegible] periculi. Exemplum infra in probl. 23.

[illegible] Lunares excipere instru- [illegible] in tabella exterior, solidarum partium et [illegible] in partes 360, quacunque ratione statue [illegible], sic ut initium divisionis sit praecise [illegible] consignationem deliquii Lunaris cupis annotare. [illegible] diametro circuli, in regula sit trans- [illegible] Collocato itaque circello ut jussus es, transfer [illegible] et oculum move, donec transversale cor- [illegible] Regula ostendet in circulo gradus [illegible] instrumentorum metallicorum artifices qua- [illegible] instrumentum infigere tripodi, et in circulum [illegible] circulum vero ex duobus oppositis [illegible] eidem tripodi affigere. Id instrumentum

[illegible] ubi nostrum instrumentum eclip- [illegible] Lunae deficientis in obscuro, atque [illegible] non fert ad dinumerandos in tabella [illegible] cum tenebris permutatio [illegible] In hunc modum observavi eclipsis [illegible] Mai, cujus observationis series [illegible] quasdam, utrinque deliqui [illegible] ad se momenta, cum numero [illegible] Lunaris parte vel ab [illegible] vel decrescunt prona [illegible]

reliquo modus hic habet compendium. Nam [illegible] circuli per centra ad verticalem fuere [illegible] verticalem, sed ut per verticalem scirentur [illegible] centra ad ipsam eclipticam. Hic vero inclinationes [illegible] sphaeram referuntur. Fundamentum horum probl[illegible] fixa in rectam incidentia attinet, est hoc, quod com[illegible] hoc est sectiones binorum circulorum, est per[illegible] centra. Exempla sunt probl. 21. et in antecedenti[illegible]

Problema XX. Tempora phasium com[illegible] olim Regiomontanus ex Albategnio praecepit [illegible] De nocte rectissime clarae alicujus fixae alti[illegible] coelum sit latentibus fixis, Lunae ipsius al[illegible] et notatio azimuthorum horum omnium, [illegible] habeatur, in doctrina primi motus abunde docetur. Melchiori Joestelio sub manibus esse egregium [illegible] problematum primi mobilis per prosthaphaereses [illegible] quod calculi genus Tychoni inde a multis annis [illegible] a Clavio percultum, jam tandem a Joestelio [illegible] ablego. [94]) Nam haec problemata observatoria [illegible] altera sequentur, secundis mobilibus, nempe [illegible] primo mobili. Tycho Brahe horologiis ut [illegible] horologii periculum fit per aliquot dies prae[illegible] nota nullo cursus facto, notantur in eo in[illegible] ultimi applicationis Solis vel Lunae vel [illegible] eundem et certum circulum. Ita phases [illegible] pers intervalla ab horologio indicata con[illegible] et seqq.

Declarabo autem modos al[illegible] 23. Aprii. Gratii Styriae, cum luna[illegible] [illegible] Lunae vero altitudo [illegible] [illegible] altitudine Arcturi. Ex obser[illegible]

[illegible] igitur meridianorum circiter 15° vel [illegible]

[illegible] Junii, Pragae Bohemorum observavi [illegible] Horologium Tychonis ad manus erat [illegible], utcunque initio curasus capto, accom- [illegible] altitudinem $4\frac{3}{4}$ graduum.

[illegible] quae mentem euntis 4° 40′. Vera ergo hora 7. 22′

[illegible] „ „ „ 7. 38.

[illegible] Nubes colorem Solis [illegible] „ „ „ 7. 41.

[illegible] 24h „ „ „ 7. 42.

[illegible] 6. 15′ „ „ „ 7. 50.

[illegible] per calculum, ut etiam ex [illegible] argumentatione altitudinis [illegible] prius. Luna orta est in [illegible]

[illegible] Lunae vestigium „ „ „ 8. 43.

[illegible] circumferentia Lunae $\frac{1}{4}$ ab- [illegible] quotebat infra Jovem „ „ „ 8. 54.

[illegible] „ „ „ 8. —

[illegible], sed pallida „ „ „ 9. 2.

[illegible] minuto post, sc. h. 9. 3′, calculus Tychonis [illegible] per horarium, aequationem temporis, semi- [illegible] et meridianorum Pragensis et Huennensis diffe- [illegible]: quae mutari possunt, salva hypothesi, ipsos [illegible]

[illegible] Lunae visibilem secundum longam [illegible] in praecipuis phasibus. Admonitio [illegible] Lunae utiliter observantur, ne forte [illegible] habet cum 19. praemisso. Nam [illegible] principio Cancri vel Capricorni [illegible] ad meridiem coincidat: vel [illegible] in nonagesimo gradu consistat, [illegible] longitudinem removeatur. At si [illegible] medium eclipsis attendatur, per [illegible] ceterae supplere poterunt [illegible] meridiem vel nonagesimum vel [illegible] dirige. Inde nota diligenter [illegible] quibus articulis Lunae [illegible] in meridiem appellat. Nam [illegible] coeli habetur. Quodsi Luna [illegible] augetur longiori circul- [illegible] centro Solis. Neque [illegible] tardiora.

post ex cujusdam Lunaris eclipsis coincidentis [illegible] tempore locus Solis ab aequinoctio ideoque in [illegible] Solis oppositus locus umbrae, ex loco umbrae [illegible] locus Lunae) retulit Spicam Virginis in 23° 30′ [illegible]

Idem anno 43. tertiae Calippicae vernale aequinoctium [illegible] hendit contigisse in 29. mensis Mechir post [illegible] 30. Rursumque coincidens eclipsis Lunae, ad Spicam [illegible] loco, videbatur ipsi referre Spicam in 24° 45′ [illegible]

Regiomontanus et Purbachius Viennae [illegible] his verbis. Anno 1460. 27. Decembris in principio [illegible] vocant Alramech habuit altitudinem antemeridianam [illegible] 17°, in fine morae 28°. In principio eclipsis fuit Luna [illegible] culo magno, transeunte per caput Geminorum antecedens [illegible] Canis minoris: in fine autem super uno circulo transeunte [illegible] sequentis et Canem minorem.

Inde eliciunt principium hora 11. 42′; morae [illegible] finem morae h. 13. 55′. Haec consignationem Tycho [illegible] apposuit: si haec exacta essent, posse hinc verificari [illegible]

Anno 1601. 29. Nov. vel 9. Decembris [illegible] eclipsin Lunae in hunc modum. Utebantur horologio [illegible] cursus fortuitum erat. Adhibuimus et quadrantem [illegible] silum siderum in meridiem. Locus Solis fuit 17 [illegible]

Nostrum horol. 5ʰ 25⅞′. Hor. urbis 5ʰ. [illegible]

„ „ 5. 33¼ ergo vera hora 5. 21 [illegible] observatum fuit in quodam astrolabio, quod potuit [illegible] statim constitutum, et temporaria distantia [illegible]

N. hor. 5ʰ 35′ Vera hora 5ʰ 23′. Mutata [illegible]

„ 5. 37. „ 5. 25. [illegible]

[illegible]

[illegible] et Saturno, cujus observationem sub-[illegible] in Saturni et Jovis altitudinibus [illegible] meridiem non ea praecisione [illegible], [illegible] cum indice secundorum [illegible] Tychonico [illegible]

[illegible] 10h. Vera ergo hora 9h 53½′. Arcturus [illegible]

[illegible] deficiens stabat in eodem praecise verticali cum [illegible]; a quo propter motum primum et parallaxin in [illegible] tempore iterum recessit in occidentem.

[illegible] Bohemicum 2h.

[illegible] 10h 49′. Jupiter in meridiano alt. 24° 32′. Et jam [illegible] Lunae in meis oculis, perspicillis semotis, frangebatur. [illegible] 11h.

[illegible] hora 10. 39. Mihi videbatur [illegible]. Lunare instrumentum prodidit inclinationem umbrae ipsius ad ortum 224½°. Stabat autem 270° in nadir.

11. 4. Aliis quoque aliquid deesse videbatur. Inclin. [illegible]°. Luna describebat verticalem cordis ♏, [illegible] retrocessisset, non tamen toto tempore.

[illegible] Inclin. 230½°. Linea ex ♄ transibat per centrum.

11. 24. Caput Serpentis in meridiano. Inclin. 236½°. Deerant 5 digiti. Jam quae per centra [illegible] transibat.

[illegible] Bohemicum 3. 45′. Inclinatio 242°.

Dimidium.

Horol. Boh. 4h. Saturnus in meridie alt. 21° 47½′.

[illegible] circumferentiae.

[illegible] Horol. Germ. 12h. Inclin. 244½°.

[illegible] Lunae centrum in meridiano, ejus residuae [illegible] medium altum [illegible].

[illegible]

[illegible] spectabant cor Scorpii.

[illegible] stabat [illegible].

[illegible] erant in recta, jam occiden-[illegible] elevatior.

[illegible]

Cum ergo hora 12. superfuerit [illegible] 15 minutis antevertente centrum umbrae, quae [illegible] evenit, ut hora 12. 1′ centrum Lunae in [illegible]

In Tychonis Brahe observationibus [illegible] et meridiani opportunitate et observandi diligentia [illegible] 1588. 3. Martii. Nam toto durationis tempore, [illegible] distantia limborum a corde Leonis et Spica [illegible] Illa vero commodius refertur in partem alteram [illegible] tinet restitutionum Lunarium ex eclipsibus.[37]).

Problema XXII. Instrumento [illegible] expedite. Nihil novi, nisi quod usum [illegible] omnia ab uno observatore perficiantur, [illegible] occurrebant, demonstratur.

Observator igitur mensae adstat, transtrum [illegible] transferens, regulam vero vel attollens vel deprimens, aliquod momentum omnibus circumstantiis notare [illegible] radium habuerit, signum facit et in quadrato [illegible] in regula, qua se mutuo secant, hisque tibiis [illegible] postea immoto instrumento numerum seu notam [illegible] index monstraverit, quid transversale, quid umbra [illegible] Eo facto rursum se ad aliud momentum [illegible] eodem loco iisdem manibus et sine titubatione [illegible] ponendum, ubi adjutores periti defuerint. Nam [illegible] adjuvant.

In azimuthali igitur quadrato [illegible] distantiae lineaeris a vertice in transtro [illegible] tibi, ligulam dimensione particularum adhibe [illegible] ad idem temporis momentum [illegible] in fine capitis [illegible]

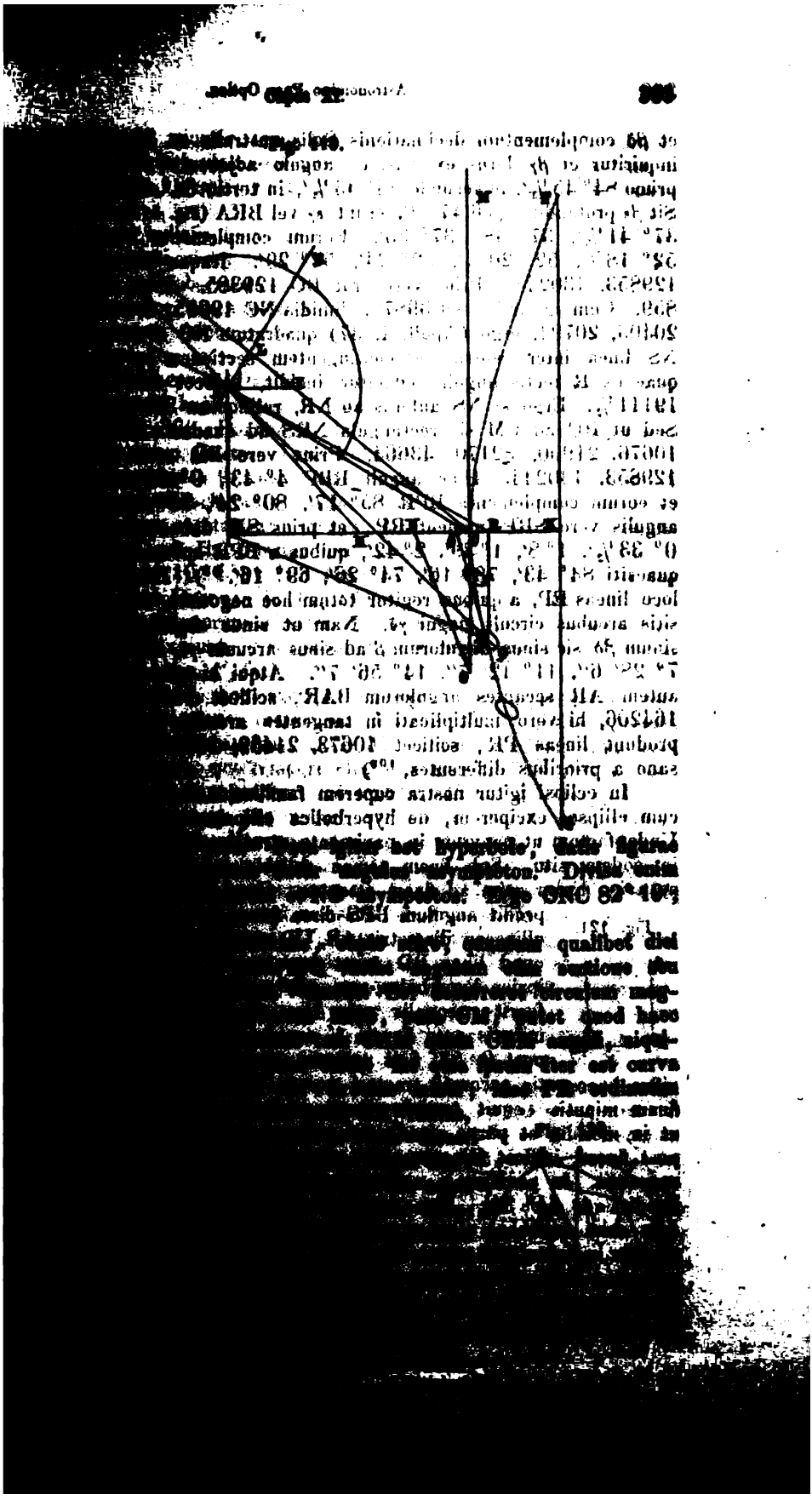
[illegible] quae Sol [illegible] conica. Nam [illegible] Sole [illegible] propemodum circulus (alias [illegible] modo [illegible] intermedia [illegible]

[illegible] in pavimentum incidunt, sectio est [illegible] ipso; ubi haec sectio est circulus (I. [illegible] horizontis non omnes totius circuli radios [illegible] sunt infra horizontem) et est parallelon alicui [illegible] ductum basin ejus secat, circulum nempe [illegible] sectio haec est hyperbole, et ad vitandam [illegible] quod continuatio ellipsium in pavimento per [illegible] hyperbolas.

[illegible] cavitatibus seu nodis gnomonum: qui sunt loco [illegible] duae cum luminares verticibus coibant, [illegible] cono umbratili ad commune gnomonis sig[illegible] ab animadversum a scriptoribus scioterricorum. [illegible] omnes hujusmodi lineae sint hyperbolae [illegible] tantum; tunc enim iter ellipsium est linea [illegible] obtusissima), notanda est etiam habitudo [illegible] ad [illegible] suum. Notum est ex antecedentibus, [illegible] perpendicularis, quod axes (seu vulgariter [illegible] diametri) perrigant sese ad id punctum pavi[illegible] ex fenestella incidit. Perpendicularis enim [illegible] eodem sensu plano verticalis circuli. Ad idem [illegible] hyperbolae, quam creant ellipses ejus diei. [illegible] ita, datur in eo punctum, a quo omnes [illegible] hyperbolas.

[illegible] punctum ex continuatione ellip[illegible] in pavimentum strata excipe sive annota [illegible] verticis ellipseos, simul et ductum [illegible] ellipseos in iter hyper[illegible] obliquissime. Ductu itaque contin[illegible] ellipsibus cum ea factum. Deinde [illegible] ejus diei sectionemque ejus hyper[illegible] subjectam, quod [illegible] quod [illegible] quod a vertice ducta recta [illegible] punctum et [illegible] ducta [illegible] punctum. [illegible]

radius in papyro grossi argentei magnitudine, ut [illegible]
verim; Sol enim in nicta oculi rursum condebatur. [illegible]
sonuit quadrantem unum supra decimam. Post horam [illegible]
Cornu pronum, in radio paulum ad occasum vergens [illegible]
in coelo igitur supinum, et eclipsis septentrionalis; [illegible]
12 paulo minus 6 digiti erant in umbra radii. Umbra [illegible]
si radium inspiceres ad septentriones converso vultu. [illegible]
decimam in urbe digiti quasi 4: inclinatio quasi 23° [illegible]
3 1/4 circiter, inclinatio videbatur 20°. Cum digiti 3 [illegible]
horologio quadrantem unum sonante, inclinatio quasi 21 [illegible]
3 1/4, inclinatio 22° circiter. Hora urbis dimidia [illegible]
natio 25° circiter. Paulo post digiti 1 3/4 quasi; [illegible]
verissima 21°. Causa discrepantiae haec fuit, quod [illegible]
non bene memor neglexi, circulos in papyro [illegible]
diametris, ad observationem afferre: ergo dum [illegible]
per puncta signo, Sol interim abibat, nec discre[illegible]
radius in papyrum incideret. Itaque et Lunae diameter [illegible]
minor, neuquaquam tamen major vel aequalis Solari [illegible]
hoc deerat, quod verticalis indicium non aliud [illegible]
Jamque agnoscebam impedimenta ista: ergo ad [illegible]
finem eclipseos per ellipses notare coepi, non [illegible]
desso, et inclinatio et tempus hinc haberi possent [illegible]
novem ellipses usque ad finem eclipseos [illegible]
notae tangentes. Itaque minuta plus quam [illegible]
Sene cum desiisset, paulo post sonuit [illegible]
Erat mihi quadrans lignea, non major [illegible]
Sole a vertice, postquam tertium quadrantem [illegible]
nitus fuit, illo macido locum Solis ex Tabulis [illegible]
meridiane. Altitudo aequatoris. Gradii [illegible]
[illegible] 49°, 49 [illegible] altitudo [illegible]
[illegible] 44° 16' [illegible]
[illegible]
[illegible]



et $\beta\delta$ complementum declinationis Solis australis [illegible] inquiritur et $\beta\gamma$ latus ex basi et angulo adjacente, [illegible] primo 84° 45 ½′, in secundo 84° 43 ½′, in tertio 84° [illegible] Sit $\beta\varepsilon$ profunditas poli 47° 2′, erunt $\varepsilon\gamma$ vel BRA (Fig. [illegible] 37° 41 ⅙′, 37° 38′, 37° 33′. Eorum complementa [illegible] 52° 18 ⅚, 52° 20 ⅙′, 52° 24′, 52° 29′. Itaque [illegible] 129853, 130244. Prius vero erat BC 129385. [illegible] 859. Cum igitur HC sit 39870, dimidia NC 19935, [illegible] 20403, 20794, ergo (Apoll. I, 37) quadratum NC [illegible] NS linea inter centrum et contingentem sectionem [illegible] quae ex R rectis angulis educitur incidit, scilicet [illegible] 19111 ½. Ergo si NS auferas ab NR, relinquitur [illegible] Sed ut HC ad CM sic rectangula NRS ad quadrat[illegible] 10676, 21900, 32170, 43664. Prius vero BR [illegible] 129853, 130244. Hinc anguli RBP 4° 43′, 9° [illegible] et eorum complementa BPR 85° 17′, 80° 24′, 70° [illegible] angulis vero SRP minent RP, et prius SR [illegible] 0° 33 ½′, 1° 8′, 1° 39′, 2° 42′, quibus a BPR [illegible] quaesiti 84° 43′, 79° 16′, 74° 26′, 69° 18′. [illegible] loco lineas RP, a quibus regitur totum hoc negotium [illegible] sitis arcubus circuli magni $\gamma\delta$. Nam ut sinus [illegible] sinum $\beta\delta$ sic sinus angulorum β ad sinus arcuum [illegible] 7° 28′ 6″, 11° 12′ 7″, 14° 56′ 7″. Atqui [illegible] autem AR secantes angulorum BAR, scilicet [illegible] 164206, hi vero multiplicati in tangentes arcuum [illegible] praebant lineas PR, scilicet 10672, 21450, [illegible] sane a principibus differentes.[100])

In eclipsi igitur nostra experiemur fundam[illegible] cum ellipsem exciperem, de hyperbolica [illegible] Undefactum ut [illegible] in [illegible]

Fig. 141. [illegible]

[illegible] tempore decrevit eclipsis per 1¾ digitos, [illegible] aut crescit. Itaque si digitus [illegible] 2. 36'. Sin illic minus, hic quoque [illegible]

[illegible] defectus cadat in horam 12. 55', ablatis [illegible] in 10h. 19' aut plus. An hic quoque tetti- [illegible] Videamus. Cum in quadrante meo [illegible] 59', nullum adhuc erat vestigium de- [illegible] ante decimam. Inde Sol nubes [illegible] quasi ½ horae; donec emergens digito [illegible] Tychonis studiosos eodem [illegible] in initio versante proditum est initium [illegible] 2. 29'. Digiti 9½. Atqui tempus [illegible] Lunae enim ut septentrionalis par est ut [illegible] superat, 5' in Solis corpus demetitur [illegible] longiorem per corpus Solis. Vide igitur [illegible] Tychonis, ut ad Maestlinum scripsit, [illegible] per armillas observavit h. 9. 52', [illegible] meridianorum differentia est [illegible] 12. 17½'. Gratii h. 11. 37' aut plus [illegible] 20', non 5', siquidem ostia [illegible] Nec Hondii tabula multo aliter differentiam [illegible]

[illegible] declarabo, et quaesam ex meis [illegible] Primum exquiram proportionem [illegible] Solis 37' et 36', quales fere paulo [illegible] ellipsis signavi. Cum sint 52° 45', [illegible] differentiae 1197, 1212, ergo longior [illegible] quoque, facta (multiplicato secante [illegible] 53° 45', 54° 0', 541,15', [illegible] 1274, ergo longior diameter 2536, [illegible] 17 ad 10, prior paulo minor. [illegible] et rapidissime, prodit minor [illegible] et haec eadem est, qua in hunc [illegible] Diameter igitur lon- [illegible] hujus, literis AB [illegible] in linea GL perpendiculari [illegible] ex E circulus BG, [illegible] BG latus curvum [illegible] erit

alterum semper in imo vertice conscio, quod [illegible] discedebat. At in sexta, ubi jam humillima sub [illegible] rioris cornu discerni potuit, prodit rursum [illegible] 26°, procul dubio vitiose. In octava 20°. In nona [illegible] 22½° in ipso fine: quae collatione omnium [illegible] nationes hae in principio et fine tarde, in medio [illegible]

Da veniam lector, quod haec tibi non [illegible] observata propono. Deliquium enim insigne fuit, [illegible] nomie per multos annos cum desiderio fuit [illegible] paucissimis locis visum, coelo nubilo. Quare [illegible] cunque de eo extare, quam plane inobservatum [illegible] tanta inest incertitudo, ut repudiari debeant [illegible] recludo, candoris mei est. At non ubique [illegible] sub finem eclipsis duo, quae observata [illegible] secunda dubitare possum, an dat fuerint [illegible] contigerint sincerissime et nulla plane [illegible] priusquam extremafentur: altitudo Solis [illegible] bilem. Et hic ipse consensus non [illegible] Saxonis et Danis eumque ipse Tychonis [illegible] sed quid contra quatuor consentientes [illegible] inclinatione sequentibus problematis [illegible] positus absentiant.

Problema XXIV. Dato tempore [illegible] metris luminum et inclinatione circuli [illegible] eorum latitudinem visibilem [illegible]

Problema Hactenus [illegible] est, sed fit [illegible] diluni observationis principium [illegible] usque Solis dimidiatur [illegible] [illegible] 49° 34' [illegible]

[illegible] inter MNV. Accingor [illegible]
[illegible] 4, [illegible]
[illegible] 50' est altitudo [illegible]
[illegible] et horizontem, quibus arcubus [illegible]
[illegible] FX. Nam Copernici tabula
[illegible] sufficienter exhibet. Itaque inventa NV,
[illegible] datur latera. Nam S est 16° 45' [illegible]
[illegible] tangentem NV auctum cypris
[illegible] tangens quaesit angulum NSV 86° [illegible]
[illegible] sub principium solet esse in occiden-
[illegible] quam Sol. Ex observatione vero est
[illegible] 59'.

[illegible] quae sit LE, tertium datur polus trian-
[illegible] a quo basis LS et angulus dantur,
[illegible] 1° 57' bor. ES longitudo
[illegible] ad longitudinem vero tabulam multi-
[illegible] quaere distantiam centro-
[illegible] angulum inter ecliptica et ele-
[illegible] quae est vera latitudinem. Si
[illegible] in margine, area exhibet
[illegible] latitudine ad certum momen-
[illegible] latitudinem ad aliud mo-
[illegible] Quoque autem es questionis
[illegible] vere cognitam, et notarium
[illegible] in exemplo de hoc (post
[illegible] proposita hora 12. 59'
[illegible] 39° 50'.
[illegible]
[illegible] 35 [illegible]
[illegible] ex
[illegible] eundem

19′ 21″, hinc prodit LSE 37° 30′. Ita VSN [illegible] Prius inventa est VN hoc ultimo momento 41[illegible] nonagesimum est 37° 59′, prodit ergo angulus [illegible] 55° 8′. Subtraho LSN, relinquitur 17° 2[illegible] inter [illegible] et verticalem. Observatus est 22½°. Differentia [illegible] verso si 22½ assumseris, prodibit latitudo visa [illegible] polis minor; quae minutiae varias ob causas [illegible] umbra primi momenti non plane ad dextram [illegible] visa est haec species; vel quod de quantitate [illegible] quis enim haec in tam parvo radio exquisite [illegible] vel quod in fine tirocinium novae artis et [illegible] perfectae; denique quod cautiones capitis secund[illegible] ignoratam foraminis quantitatem non adhibui [illegible] mate patet, minuto radio elliptico per limbum [illegible] rum exemplo docui, quantum conferant inclinationes [illegible] visae latitudini. Pro visibili longitudine in [illegible] 55° 8′ auferatur VSL 22½°, observatus [illegible] computatus vero fuit 37° 30′, quare SL[illegible] Quorum sinus in summam semidiametrorum [illegible] hic 25′ 4″, longitudinem visibilem Lunae [illegible] erat 29′ 3″. Ergo horis 2. 28′ visibilis [illegible] qua vel 55′ 43″ vel 54′ 7″, illa ex observ[illegible] putata. 105)

Problema XXVI. Ex dato [illegible] ad certa momenta [illegible] a centro Terrae [illegible]

[illegible]

[illegible] longitudinis hujus latitudinis [illegible] occidentalem, quia Luna [illegible] (parallaxi) a 29′ 3″ visibili Lunae distantia [illegible] vera distantia Lunae a Sole in [illegible]. Ergo distantia vectioris et nonagesimi est 44° 27′ [illegible] 30″ ut antea excerpo parallaxin latitudinis. Quodsi recte inventa fuit visibilis latitudo [illegible] ergo addita parallaxi Lunae a Sole, vera latitudo longitudinis ad hoc momentum ut prius sic ago. [illegible] ergo nonagesimi est 48° 33′. Cum hac [illegible] titulus 44′ 24″. Subi his novis [illegible] nonagesimo 37° 31′ (est enim Luna [illegible] 24° 48′ 30″) excerpo parallaxin longitudinis [illegible] in centesimis. Adde hanc ad superaticehem [illegible] quae fuit 26′ 40″, prodit longitudo [illegible] Solem 25° 26″; ergo Luna veri [illegible] a Sole 19° 13′ 15″, minus etiam [illegible] habemus [illegible]. Supra ex Tychone hinc horae [illegible] (non tot digito). [illegible] Lunae, aut urbis [illegible] Denique et [illegible] [illegible] Tychone [illegible] [illegible] Denique [illegible]

optatum locum, ad assumtam nempe [illegible] cata. Quodsi aberres a vera parallaxi, [illegible] errorem cum differentiis parallaxium [illegible] quasi per falsi regulam. [illegible]

Problema XXXVII. In data poli elev[illegible] fine seu momento, et loco Solis [illegible] et diametris luminarium, quantitate [illegible] Minuta, denique distantiis luminarium [illegible] rere conjunctionis verae articulum [illegible] vero et differentiam meridianorum [illegible] hujus pretium certius voluptate [illegible], et si [illegible] nis. Cupio scire, quo articulo vera conjun[illegible] differentia meridianorum habeatur, simul [illegible] impeditus observator initium [illegible] id facile patebit, si latitudinem nostra [illegible], in nostra latitudine ad finem [illegible] incertitudinem. Poli Hafniensis altitudo 55° [illegible] assumatur ut jam modo 32° 50′. [illegible] Scimus Lunam vere septentrionalem [illegible] Parallaxis Lunae a Sole horizontalis sit [illegible] 19. 22′. Locus Solis initio [illegible] Ante [illegible] constituantur parallaxes [illegible] 48′. Hinc ablata 22° 45′ [illegible]

[illegible] parallaxis, latitudinis Lunæ a Sole 58′ 27″, [illegible] 10″, quæ accrescit differentiæ visarum latitudinum [illegible] 17′ 16″ visæ latitudinis [illegible] cum utraque longitudinis parallaxis [illegible] 24′ 26″ majori, restat 29′ 58″ [illegible] Lunæ motu ablata, qui fuit 1° 21′ 32″, [illegible] Lunæ a Sole intra tempus durationis quæ [illegible] BA repræsentans [illegible]

Fig. 124.

[illegible] rectus agatur [illegible] differentiæ visarum latitudinum [illegible] Gibberis visa via Lunæ. [illegible] AFC, ut utrumque crus [illegible] parallaxeos [illegible] et ex [illegible] Lunam, ex F circulos Lunæ, et per [illegible] ipsi BA, et CB con[illegible] fiat AE, erit DE ecliptica visibilis, et AE, [illegible] quibus viræ postea mediantibus parallaxibus [illegible] aliquam BD in omnipotentia, et abscissis quadratis FC, vel FA, reliquantur duo quadrata, quorum [illegible] Si cui lubet per algebram quæsitum elicere, [illegible] abscissis et numeros æquatur quadratis et [illegible] patet. Nam ut AB ad BC sic sinus [illegible] BAC, inquit fit 16° 26′ ½″. Vicissim ut sinus [illegible] BAC ad AC, quæ fit 4° 0′ 25″, ejus [illegible] AF ad AC ipso sinus totus ad sinum [illegible] BAC 17° 27′. A quo subtractus BAC [illegible] 0° 59′ 58″. Denique ut sinus totus ad [illegible] Equal BD quæsitum, quem fit 0° 28″. [illegible] 16° 0′ 22″ borealis, ad finem 17′ 44″; [illegible] latitudo 56′ 59″ boreali [illegible] quæ est Gratii [illegible] 28″. Vel minimum 52′ 20″ [illegible] convenit, qui in medio ecliptis [illegible] proxima [illegible] aliquid addi-

$3\frac{4}{16}$ digitos. Itaque tantum $8\frac{1}{16}$ digiti [illegible] tamen ultra 10 fuisse certum sit. Vide [illegible] Sed esto aequalis oculorum fallacia in principio [illegible] conjunctio Huennae. Et quia AFE 50½′, erit HAE [illegible] totus ad AF sic sinus EAF ad EF visibilem [illegible] manet 31′ 40″. Subtracta a 57′ 54″ sc. ED [illegible] Parallaxi longitudinis illic subtracta hic addita, [illegible] 30′ 52″, hic vera superatio 50′ 40″. Quod si [illegible] horam, quid 30′ 52″? Prodeunt 56′ horae [illegible] h. 10. 59′ articulus verae conjunctionis Uraniburgi. [illegible] meridianorum 18′, seu 4½°, quantum proxime [illegible] hoc erat inquirendum hac vice.

Itaque si saltem unico loco eclipsis aliqua Solis [illegible] rite fuerit observata, aliis vero locis tantum [illegible] finis, hac methodo pronunciari potest de differentia [illegible]

Problema XXVIII. Si per [illegible] diametri proportio ad Solarem [illegible] sciatur vero vera proportio diametrorum [illegible] quantum observatio digitorum a vero [illegible] Anno 1590, die 21. Julii Maestlinus praeceptor [illegible] eclipsin Solis sub simplici et obscuro tecto [illegible] misit. Descriptionem observationis ut illam [illegible] commentabor, ut hoc exemplo usum aliquid [illegible] rem. Initium nos latuit. Ergo cum [illegible] ejus altitudo supra horizontem orientalem [illegible] observata fuit 88°. Luna in medio superiori [illegible] Circa medium eclipsis [illegible]

[illegible] mediocris et minimae diametri (hic 30″) [illegible] ab apogaeo (in hoc exemplo) in margine, [illegible] residuum adde minimae diametro. Si [illegible] quadrantem, excessus in margine quaerendus [illegible] fronti summaque addenda diametro [illegible] Lunae agemus. Distabat Luna ab apogaeo [illegible] centum et eccentricitatem 4336 ut in superiori [illegible] Lunae 30′ 50″, semis 15′ 25″. Qualium ergo [illegible] BH est 15′ 2″. Et quia sunt aequales BF et HI, [illegible] Summa ergo AF et BH aequalis est summae [illegible] Ergo AF Maestlini dimensio 47 est aequalis [illegible] ergo si 47 dant 30′ 27″, quid efficient 23 in [illegible] prodit 14′ 54″, scilicet AB, et AF 15′ 25″, [illegible] putaretur Maestlino dimidia diametros deficere. [illegible] M 30′ 27″, ergo AB justa visibilis distantia con- [illegible] quitur 14′ 55″.

Ex altitudine Solis vel stellae, cognita [illegible] compendiose et discrete tempus [illegible] a meridiano indagare. Certamus in una [illegible] negotio prosthaphaeretico Wittichiano. Quamvis [illegible] in sublimi tamen incedimus et prospectum [illegible] Wittichium vero valles abscondunt, quia [illegible] circulo in sphaeram tralata: mea haec [illegible] spiera.

[illegible] parallelon per centrum ejus circuli transire, [illegible] motum conficiendam occupat. Ut igitur [illegible] altitudinis poli, ita sinus declinationis Solis vel [illegible] vel profunditatis hujus plani supra hori- [illegible] vel meridie Merit. Deinde perpende, ut [illegible] super horizonte, sic parallelon super hoc [illegible] gradum a plano inchoatorum sinibus [illegible] quorum maximus est differentia sinuum [illegible] stellae vel contra aggregatum [illegible] stellae. Itaque sinus altitudinis [illegible] altitudinis et meridiana et [illegible] vel aggregatum [illegible] quadrantem (si similiter) distantia [illegible] Tubingae

cujus complementum 71° 20′ metitur tempus [illegible]
Defecerunt ergo scrupula 15′ 31″, h. 7. 14′ [illegible]

Eandem methodum sequar et in altera [illegible]
Solis 33° et in duobus reliquis, ubi altitudo [illegible]
quod hic miscebo prosthaphaeresin in prima [illegible]
plicationem. Locus Solis ad horam 7. 15′ [illegible]
7° 25′ ♌, ergo in fine eclipsis vere est in 7° 20′ [illegible]
in 7° 30′ decrescit 2′. Tuto itaque uti possumus [illegible]

Declinatio	18°	28′				
Alt. sequat.	41.	36.				
Aggregatum	60.	14.	sinus	86661		
Differentia	23.	8.	sinus	39287		
			Reliquum	47374		
			Dimidium	23687	altitudo plani sagittae	
			Reliquum	62974	Divisor	
Altitudines Solis	33°	0′	37°	15′	41°	15′
Sinus		54464		60529		65935
Altitudo plani		23687		23687		23687
Reliqua		30777		36842		42248
Fructus		48873		58508		67096
Horum arcus	29.	15′	35.	49.	42.	8.
Complementa	60.	44′	54.	12.	47.	52.
Horae	4.	3′	3.	37′	3.	11′
Tempus ante med.	7.	57′	8.	23′	8.	49′

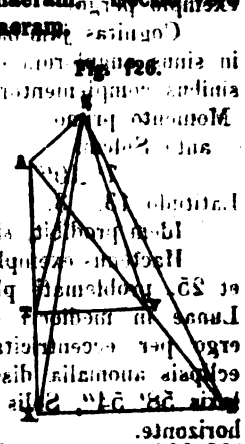
Hinc ad distantiorem [illegible] publicata [illegible] mata 24. et 26. continuabimus, elicita primum [illegible] cetera ad haec momenta quatuor.

Locus Solis	7° 25′ ♌	7° 27′ ♌	7° 29′ ♌	7° 31′ ♌
Mutatio recta	29.	29.	29.	29.
Distantia a [illegible]	34.	33.	32.	31.
Add. [illegible]	56.	56.	[illegible]	[illegible]
Culminant.	0.	41.	42.	44.
Horae [illegible]	20.	22.	[illegible]	[illegible]
Alt. [illegible]	42.	42.	[illegible]	[illegible]
[illegible]	26.	26.	[illegible]	[illegible]

Hic ergo Luna propior [illegible] inclinationes sunt majusculae, [illegible] necessaria sit. Altitudo Solis est [illegible] instrumenti, quod non Soli sed [illegible] perpendiculariter erat objectum. Cum autem [illegible] maximo circulo vel tangentibus plenis [illegible] recta est perpendicularis plano illius [illegible] centro sphaerae per planum circuli maximi educta, [illegible] rectis angulis in eam incidit. Nam (E. XI. 4) [illegible] in omnes plani lineas est perpendicularis [illegible] plano italia. Nam circulus maximus est hic [illegible] eductus. Finge illum tangi in puncto verticali [illegible] horizontis, aequidistat. Finge tangi illum [illegible] cum horizonte, ei plano diximus aequidistitisse [illegible] illum tangi in centro Solis a plano tertio [illegible] horizontis cadit extra sphaeram. Sectio vero [illegible] horizontis cadit intra sphaeram.

[illegible] STV instrumenti, SXY [illegible] Sed TV, XY sectiones [illegible] alia SV faciens [illegible] AV in XY connec- [illegible] ATS, AXY recti, erit [illegible] Sed TSV inventus [illegible] AT sinus com- [illegible] TSX est [illegible] TX 46027 [illegible] AT ad TV sic AX [illegible] STX quatus et [illegible] AT sic secans TSX [illegible] XYY quatus (nam [illegible] plano horizontis)

Fig. 126.



[illegible] XSY, quaesitum, qui fit 23° 23′ [illegible] latitudini 25° 42′ 29″ [illegible] 15′ inclinatio [illegible] cer- [illegible] 30″ [illegible] 30″ [illegible] eclipsis [illegible] horizonte.

dantur bases LS et anguli quoque et latera [illegible]
Sunt autem bases in primo et secundo momento [illegible]
semidiameter deficere videbatur. Distantia igitur [illegible]
14′ 55″ in tertio momento, quia quarta pars [illegible]
deficere, ergo subtrahatur haec a summa semidiame[illegible]
diameter Solis 24, Lunae 23, summa 47, quarta [illegible]
decem ergo 35 in radio ampliato. Manent vero [illegible]
problemata. Et quantum augetur semidiameter Solis [illegible]
Lunae, itaque et summa semidiametrorum [illegible]
problemate. Proportio igitur summae ad centrorum [illegible]
quis summa semidiametrorum vere est 30′ 27″, [illegible]
summa ad centrorum distantiam 22′ 40″. In hac vero [illegible]
aequat summam semidiametrorum 30′ 27″. [illegible]
exempli tantummodo causa tracto. Nam rem [illegible]
inter observandum mutata esse forsanna; [illegible]
fuerit in posterioribus; nec ad hunc annum [illegible]
exemplo pergo.

Cognitas jam bases, ut parum a [illegible]
in sinus angulorum et rejectis [illegible]
sinibus complementorum longitudines vicis [illegible]

Momento primo ante Solem.	Secundo post Solem.
7′ 10″	42′ [illegible]
Latitudo 13. 3.	[illegible]

Idem prodibit, si [illegible]

Hactenus exemplis per [illegible]
et 25. problemati [illegible]
Lunae in mediocri longitudine [illegible]
ergo per eccentricitatem [illegible]
eclipsis anomalia [illegible]
latis 59′ 54″, [illegible]
horizonte.

[illegible] arcus ignotus [illegible]
latitudinis 25′ 42″ [illegible]

[illegible] 9′ [illegible] colonna ad meridiem [illegible] apparentem. Ergo [illegible] parva. Consulamus igitur [illegible] latitudine Lunae certius [illegible] defectus, hora 6. 9′. Solititis [illegible] inchoasse eclipsin h. 6. 50′, desiisse h. 8. 38′, [illegible] quibus primo Lunam [illegible] h. 7. 50′ aequilibria luminaria. [illegible] portem defenisse et coronae centrum fuisse [illegible] notatis. Considerabimus hinc [illegible] minuta 6. Ergo distantia centrorum [illegible] Hora vera 8. 21′ (ut hoc etiam Scoma [illegible] Solis altitudo parallaxis mixtam [illegible] altitudinem Lunae statim constitit veram [illegible] angulo verticalis cum ecliptica statim [illegible]

[illegible] ☉ [illegible] super planum. [illegible] 34′ est 9h. 20′. 34″. 45″. Complementum [illegible] sinus complementi 57115 ad eleva-

posset, ut Maestlino deliquium in quarta diametri parte restituenda consumserit non plus 25′ temporis, Tychonicis in quinta parte plane 35′? Itaque tertia pars est 10′, antea 6′ erant; latitudinem hinc extruimus 15′ 30″ proxime. Haec ego quamvis incertiuscula non frustra inculco. Cupio enim astronomis patefacere, quam crebrae sint hallucinandi occasiones, quanta vicissim et quam exoptata utilitas, si diligentia in hujusmodi observationibus adhibeatur.

Sed quia Tubingae tempus finis nullum habet evidentem errorem, examinemus et finem Uraniburgi observatum. Sit latitudo Lunae vera sub finem 17′ borealis, et finis plane hora 9. 0′. Gradus distantiae a meridie 45°. Ascensio recta medii coeli 84° 55′. Culminat 25° 20′ ♊, cum declinatione 23° 26½′, quae ablata ab altitudine poli 55° 54½′, relinquit 32° 28′, latus MV in schemate 123. Et quia 174° 55′ oritur, de ecliptica ergo 26° 37′ ♍ cooritur, et in nonagesimo est 26° 37′ ♊. Ergo latus NM 1° 17′. Et NV per calculum 32° 26′, exhibens parallaxin latitudinis (sub titulo 56′) 30′ 3″, ejus complementum 57° 34′ exhibet titulum 47′ 17″. Sit Luna plane in 8° ♌ ad visum. Distat igitur a nonagesimo 41° 23′, quae ex titulis 47′ 17″ exhibet parallaxin longitudinis 31′ 15″. Latitudo vero ponitur 17′ borealis, parallaxis latitudinis 30′ 3″. Ergo latitudo visibilis austrina 13′ 3″. Visa vero centrorum distantia 30′ 27″. Ex basi ergo et latere latus reliquum longitudinis visae 27′ 31″. Et parallaxis longitudinis 31′ 15″, subtracta illa ab hac relinquit 3′ 44″ interstitium inter vera loca Solis et Lunae Huennae Daniae. Eandem latitudinem si Tubingae adhibeamus et a parallaxi latitudinis 23′ 42″ auferamus, erit visa latitudo 6′ 42″ australis. Et parvi trianguli basis 30′ 27″, ergo latus longitudinis 29′ 42″. Sed parallaxis longitudinis 35′ 7″. Illud ergo ab hoc ablatum relinquit 5′ 25″. Itaque differentia locorum Lunae 1′ 31″, quae faciunt 3′. Tubingae ergo h. 8. 51½′ (additis ad finem 3′) Luna ibi fuit ubi erat Uraniburgi h. 9. 0′, differentia meridianorum 8½′, 2° 8′. Minus etiam si Huennae desiisset eclipsis hora 8. 58′. Nec multum et hac via abludimus: Tubingae visus est defectus aequaliter h. 7. 14′ et h. 7. 57′. Ergo medium defectus est tempore intermedio fere, scilicet hora 7. 36′. Huennae vero incepit h. 6. 50′, desiit h. 9. 0′. Dimidia duratio h. 1. 5′, medium ergo h. 7. 55′. Sed parallaxis longitudinis Tubingensis superat Danicam 4′. Ergo 8′ temporis justo citius incidit Tubingae eclipsis. Itaque remota parallaxium differentia medium Tubingae esset h. 7. 44′, differentia meridianorum 11′ temporis seu 2° 45′ aequatoris. Et quia Huennae supersunt Lunae ad Solem 3′ 44″ temporis igitur 8 fere, vera igitur conjunctio h. 9. 8′ apparenti. Tycho ponit h. 9. 2′ apparenti, differentia 6′ temporis, 3′ motus Lunae. Unde apparet hoc loco certitudo calculi Tychonici. Infra probl. 32 plura de hac eclipsi.

Problema XXX. Ex tempore et inclinationibus praecipuarum phasium rite observatis prodere angulum visibilis latitudinis, seu eum quem visa via Lunae cum ecliptica facit. Ubi prodigiosus angulus hic, et admonitio de Ptolemaeo, Reinholdo et eorum discipulis. Id ipsum quidem jam in utroque praemissorum exemplorum, idque aliquoties praestitimus. In schemate 124. datis momentis temporum et inclinationibus et distantia centrorum FA, FC, hoc est phasi nominata, non latebit visibilis Lunae longitudo a Sole FE, FD, visibilis itidem latitudo EA, DC, per problema 24.

[illegible] BC [illegible] latitudinem [illegible] BAG [illegible] 57', [illegible] 25°40' [illegible] 29' proxime, et BAC [illegible] 21' [illegible] visi- [illegible] Lunæ esset 7°49' [illegible] Hinc [illegible] 4°49' [illegible] BC. Additis vero longitudines [illegible] BAC 16° [illegible] 51.' 81'

[illegible] Prussiæ et Reinholto filio Ad- [illegible] Magistrum me per literas admonuit [illegible] tamen ob occasiones [illegible] Ptole- [illegible] 63, 64, 65. Magini exemplar, qui [illegible] angulum hunc [illegible] ut [illegible] ?

[illegible] tibi mirabilem aliquam in [illegible] ribus, eamque [illegible] ecliptica m.

[illegible] lib. VI. capitibus [illegible]

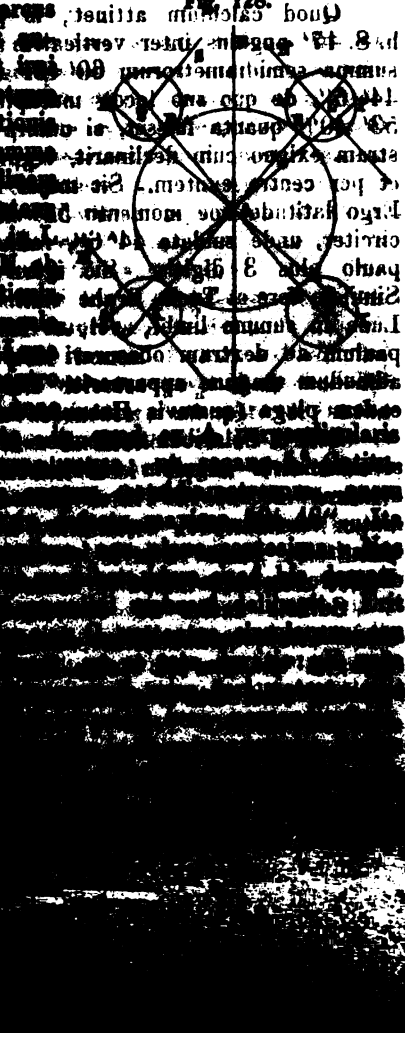
[illegible]

Fig. 127.

[illegible]

[illegible] repraesentantur K, F, [illegible] diameter [illegible] LF [illegible] 400000 [illegible] KA [illegible] totam, sic AF ad tangentem anguli EKA [illegible] angulus nempe, quem visibilis via [illegible] parallelos est KA. (12) [illegible] praecipiti, [illegible] in latum, [illegible] ad nodum descendentem tendit, [illegible] et [illegible] signa decrescit angulus inter ecliptican [illegible] latitudinis parallaxis, unde [illegible] et vero [illegible] fortasse; ideo tale quid etiam Walthero [illegible] non tantum mirum ei videbatur, sed [illegible] in dubium adducebat. [illegible] possibile sit, principium alicujus Solis [illegible] alterius finem in occasum, [illegible] inter paradoxa a Plinio (Hist. Nat. [illegible] ordinaria via ab ocasu deficere convenit [illegible] contra ab ortu incipere, ab occasu [illegible] A scribatur circulus amplus. Totum [illegible] repraesentans [illegible]

Fig. 128.



[illegible]

[illegible] 65° a vertice [illegible] vertices pervenient, [illegible] oriens. Ipsa fere in oriental quaerere [illegible] meridiem.

Adeo 10° postquam culminasset [illegible] Sol fuerit in 25° [illegible] 8. [illegible]

Denique postquam [illegible] Arcturus [illegible] Deratione [illegible] 25°. Tychonis calculus proxime [illegible] [illegible] quarta parte deesse putabatur: et [illegible] delituisse. De circumferentia quidem [illegible] Observatione autem haec defectum [illegible] quam in calculo, et umbram ad verticem [illegible] quod ipsum [illegible] Tychonis calculus [illegible] pro vera longitudine conjectione, [illegible] Vita est circumferentia obtenta [illegible] Pratzo aliquot gradibus remotae [illegible] strabatur: quod ad superiora [illegible]

Quod calculum attinet, [illegible] h. 8. 47' angulus inter verticem [illegible] summa semidiametrorum [illegible] 44' [illegible] 59' [illegible] stram [illegible] et per centrum [illegible] Ergo latitudo [illegible] circiter, [illegible] panis [illegible] Stan[illegible] Lan[illegible] [illegible] ad dextram [illegible]

[illegible] fiunt in austrum. Eclipses [illegible] incipient ab ortu de- [illegible] ab occasu desinent. Verum tamen [illegible] adjumento [illegible] vertice corporis Solaris. [illegible] versus modum deve- [illegible] in septentrionem fuerit [illegible] Leone; igitur minima [illegible] igitur australibus, ubi [illegible] a principio ad finem. [illegible] Sol ad duos digitos ab [illegible] sinistrum, in duo plus. [illegible]

[illegible]

[illegible]

[illegible] poli minor et oriens [illegible] Gratium 4° 30′ [illegible] et Hiennam 2° 45′.

inæqualiter variantur longitudinis para[illegible]
quanto propiores nonagesimo: itaque [illegible]
crescens, inæqualiter crescentibus visib[illegible]
hinc flexus viæ. Id multo magis eo[illegible]
inæqualiter ascendunt, et trihorio fer[illegible]
tarde inæqualiter crescat: tarde igitu[illegible]
inde, celeriter in fine variabuntur paralle[illegible]
unde [illegible] compositam Lunæ viam [illegible]
differen[illegible] quæ hinc existit non vide[illegible]
et nonagesimum. Quare exemplis age[illegible]

In eclipsi anni 1598. persuadebar [illegible]
quasi unico momento temporis Sole [illegible]
admodum, cornu scilicet residuum ve[illegible]
defectum me vidisse non est possibile;
statuamus et schema facimus hic; [illegible]
supra Tycho in hac eclipsi observa[illegible]
et in Dania majorem oportuit esse [illegible]
fuit. Erant autem cornua [illegible]

[illegible] Autem [illegible], [illegible] 8, ast. recta m. [illegible] 7° 12′ 45″, addo ad [illegible] 14′ 45″. Oritur vero [illegible] ex altitudine 58° 30″, [illegible] vero latitudine 54′ 43″ relinquit vis. [illegible] ostendit titulum 39° 20″. [illegible] ad visum, erit NS 22° 47′. [illegible] longitudine 15″ 14″. Lunae vero [illegible] 1° 10′ 15″, ad diametrum igitur [illegible] 25″ 26″ ante Solem. Ergo jam [illegible] visibiliter 1′ 14″ ante Solem. [illegible] CBK sunt similia triangula, quare [illegible] qualium FG 10′ 3″ (si ponas [illegible] cum hac latitudine visibili) [illegible] visibilis secundum longum [illegible] 1′ 14″ est ante H, ergo jam [illegible] minutis temporis 3. Et cum [illegible] igitur tempora minor fuit quam 10′ 3″. [illegible] quae ex computatione parallaxeon habetur, [illegible] et finis et proportionali medio habetur, [illegible] erunt ergo plus quam 6 ⅔ digiti. Et [illegible] eclipsibus satis esse videtur. [illegible] hoc Tychonicis, aequalem fuisse [illegible] principio et fine sed etiam in ipso medio: [illegible] 9 ½ digiti, plus scilicet quam ex [illegible] maximam obscurationem distantia [illegible] ut 59 ad 88, et qualium Sol [illegible] distantia centrorum est 59 talium [illegible]

exempla duarum postremarum Solis eclipsium [illegible] 32 problematibus traditae specimen exhibebo. [illegible]

Prius exemplum. Anno 1600 die [illegible] Styriae instrumento ligneo, cujus descriptio [illegible] fui circumjecta scena. Cumque nondum [illegible] particulas, notas 15 insculpsi cultello, easque [illegible] quaeque ad notas singulas in tabella viderentur [illegible] navi. Sed seriem observationis candidissime [illegible] exhibebo. Odi enim τας κεχρωσμενας [illegible] non praecipuas Ptolemaei observationes [illegible] scribo, ac si peranasum habeam in manus, posteris [illegible] judicium ei in utramque partem sincerum et liberum [illegible] vel simulandum vel dissimulandum erit.

[illegible]

1. [illegible]

3. [illegible]

4. . . . [illegible]

6. . . . . 22. circiter.

[illegible]

[illegible] inventis per dinumerationem parti- [illegible] azimutha seu verticalium per Solem [illegible]. Atque ne dubitarem de processu inventi [illegible] qui eandem Solis altitudinem exhibebant, [illegible] atque altitudine, quaesivi poli altitudinem. In [illegible] Polum, V Verticem, S, Solem, dabatur SV ex [illegible] ex declinatione Solis, et SVP ex distantia [illegible] quare et VP complementum altitudinis poli, [illegible] pro conditione hujus operationis et instrumenti [illegible] ad veram altitudinem 47° [illegible]. Itaque certus [illegible] dinumerationis.

[illegible]	[illegible]	38. 38.	
In linea versus ortum.			
[illegible]	[illegible]	[illegible]	arcus [illegible]
[illegible]	[illegible]	[illegible]	[illegible] 0.
Versus occasum			
[illegible]	[illegible]	19. 31.	[illegible]
[illegible]	1171.	29. 17.	[illegible] 21.
In linea versus meridiem.			
[illegible]	1020.	22. 11.	23. 15.

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	6369	3893	5041	[illegible]	[illegible]
12	6444	4014	5042	38. 38.	[illegible]
13	6692	4393	5047	[illegible]	[illegible]
14	6950	4635	5044	[illegible]	[illegible]
15	6964	4797	[illegible]	[illegible]	[illegible]
			5049	[illegible]	[illegible]

Patet igitur, ad transactionem [illegible] haerente, secutum instructionem vi [illegible] poht 5 momentum. Error [illegible] mentis ultimis trabs, a [illegible] regulam impedivit modice, quo [illegible] refur. Quodsi in fine [illegible] ex [illegible] differentiam invenies [illegible] horam 2. 55' 23¼. Ac [illegible] altitudinem: medium [illegible] abeat ab hoc veritate [illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7. 27. ☊	29. 54.	19. 15.	60. 10.	[illegible]
[illegible]	[illegible]	22. [illegible]	57. 28.	[illegible]
[illegible] ☊	31. 19.	23. 21.	56. 55.	[illegible] 50.
[illegible] ☊	[illegible] 24.	[illegible] 16.	[illegible] 7.	44. 53.
[illegible] ☊	[illegible] 10.	28. [illegible]	53. 58.	46. [illegible]
[illegible] ☊	[illegible]	[illegible]	53. 40.	44. [illegible]

[illegible] et hic [illegible] h. 47½′, [illegible] quae 5 Germanicis milliaribus [illegible] fuit h. 1. 40½′, duratio h. 2. [illegible]′. [illegible] etiam in radio 6½ [illegible]

[illegible] ne [illegible] observatione sua [illegible] hora 12. 40′. [illegible] scient oculorum [illegible] quantitate nihil [illegible]

dantur. Abjectae igitur de 53 semidiametris quae colligi strae, relinquuntur particulae usque ad centrum Solis valentes minutos octoaudecim radio habebitur, qui sunt 1′, quantum igitur eadem residuae ad procedit ad Lunae semidiametrum adjectam colligi distantiam. At si summa particularum ex semidiametris collectarum superet particulas semidiametri radii, ab redactum auferendus erit a Lunae semidiametro distantia habeatur.

Hic sic constitutis et adhibito angulo, quem stitutum visibilis longitudo et latitudo ad [illegible] hac adhibeo.

longitudinis. Angulus ergo vhae latitudinis parallaxis latitudinis, [illegible] etiam [illegible]. Quod vero major [illegible] angulus non fuit, [illegible] in quo parallaxes parvae et ipse [illegible]

[illegible] fuit, quod patet ex 1. [illegible]. [illegible] computentur, Luna per 28′ 16″ longitudinis [illegible] 7′ 49″. Angulus igitur latitudinis [illegible] ex 1. et 13. momentis.

[illegible] nobis in probandis Lunae motibus sit utilis, [illegible] in assimilanda illa; sequetur in parte parallaxes [illegible] eclipseos reservantur.

[illegible] Anno 1601. 14. 24. Decembris Pragae Bohemiae Solis septentrionalem [illegible], modo eo [illegible]

[illegible] motum adduxeram, ita cum [illegible] Stirnes longitudinis comparavi. Quoniam erat [illegible] duae tabellae [illegible] et probl. 13. dictum, crassitie muri non [illegible] descriptis [illegible]. Quin et fenestra sub [illegible] obliqua meridionalem murum ferienta.

[illegible] per horologium [illegible] indice, annotata sunt. Ejus [illegible] essemus, an justae esset celeritatis, [illegible] indice ad [illegible] donec Solis centrum [illegible]

Lunæ mea capiebat 30′ medium Sol 31′ [illegible]

[illegible]

[illegible] particulas obtinuit 110; Lunae seu umbrae [illegible] Solis semissis 92 $^7/_2$. Quicquid igitur in [illegible], restabit vera distantia centrorum in nostris [illegible] 110 [illegible] diametri quantitatem, [illegible] argumentatione: si 93 $^1/_2$ efficiunt 31 scrupula, [illegible] vera centrorum distantiae secundum angulos ejus [illegible] per nostram parallacticam in longum [illegible]

[illegible] particulas obtinet 110; Lunae seu umbrae [illegible] Summae semisis 97; [illegible] quid igitur in [illegible], restabit vera distantia centrorum in nostris [illegible] diametri quantitatem, [illegible] argumentaque 93, emolunt 31 scrupula, [illegible] vero centrorum distantiae secundum angulos seiae [illegible] supplementa per nostram parallaxeosem in longum [illegible]

Hactenus itaque de visus [illegible] observandi modos et cautiones traductam [illegible] IV. [illegible] in Opere [illegible] igitur ut receptui canamus ne omnia in o[illegible]

Ceterum Deus visus visusque [illegible] alterum [illegible] sive secundum hujus Operis, [illegible] dictis [illegible] harum observationum patefaciat [illegible] Theoremata [illegible] ingeniosa et [illegible] secundorum mobilium passim [illegible] vitae et compendiosius observationibus [illegible] Id [illegible] magis videtur necessarium [illegible] constitutionum [illegible] et Terrae [illegible] vero [illegible]

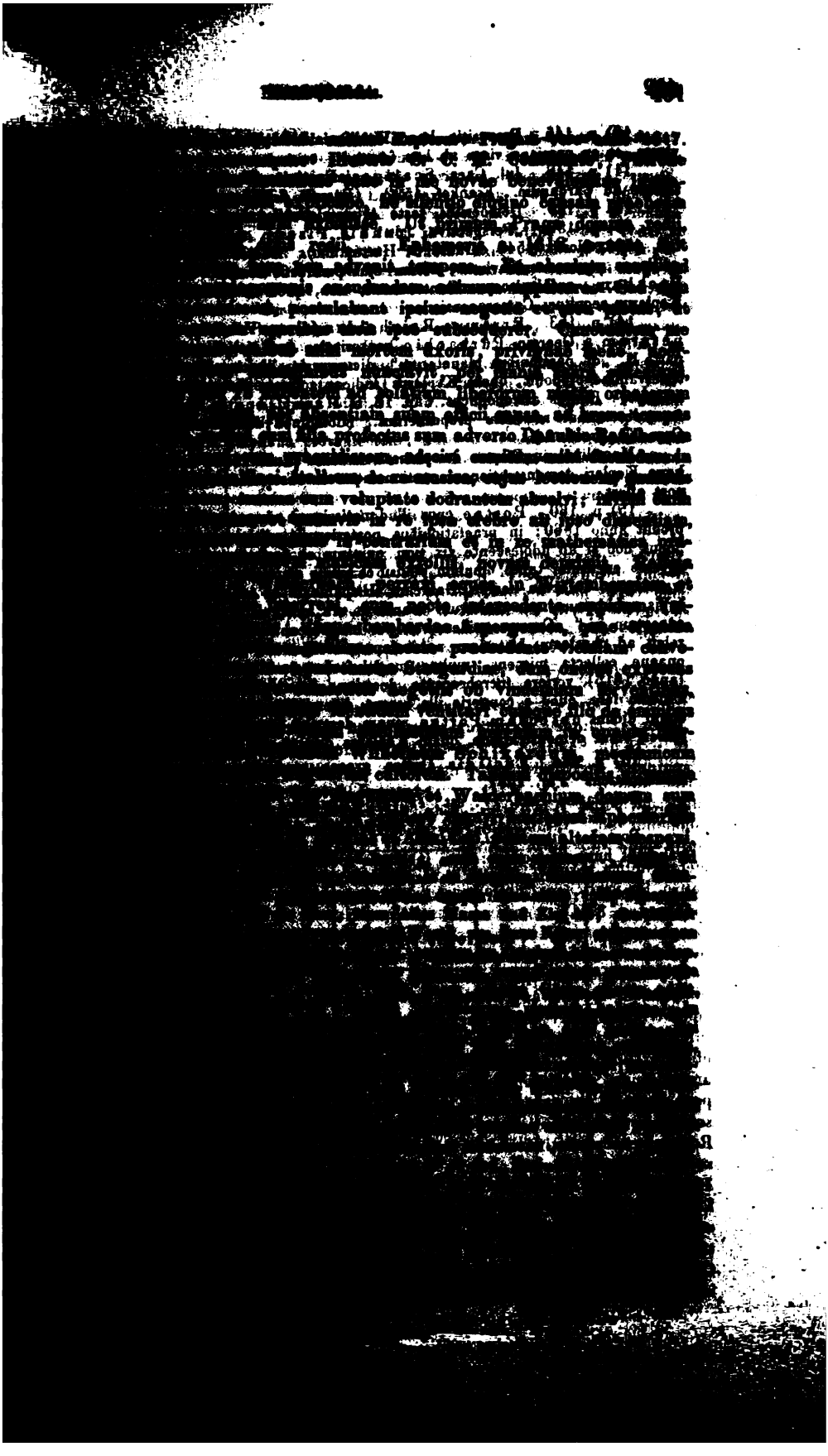
Julius Casserius, quem postea infra dicit Pa[illegible] anatomiae Patavinae (nat. 1561, mort. 1620) librum, [illegible] auditus et vocis organis. Theatrum ejus anatomicum edi[illegible]

4) p. 41. Ludovicus Coelius Richerus Rodiginus [illegible] Viennae, Milani et Padnae rhetoricam) in libro [illegible] Bas. 1517; libro VIII. cap. 18. (p. 396 sq.)

5) p. 43. Quo loco Maginus agat de speculis, [illegible] inspectione Magini opera nullum deprehendimus, in quo [illegible] litteris ad Keplerum Bononiae datis (d. 12. Jan. 1610) [illegible] 4 vel 5 [illegible] speculum transmisit, per quo [illegible] Galilaei Florentina (vol. VIII, p. 101. 132) Magnum [illegible] cum Galileo collocutum d. 26. Sept. 1610 et 14. Jan. 16[illegible] thalcorum. Caesarus Schott in „Magia universalis Na[illegible] partis I. Hoc affert: celeber [illegible] [illegible] 2, alia 6 pedum semidiametrum habebant.

6) p. 48. Josephus (non Franciscus) Ricci [illegible] compositus († 1620) ab anno 157[illegible] [illegible] quem dicit Keplerus (Salamanicae 1589), in Hispaniam [illegible] magnificentia [illegible], inscriptum: Historia [illegible] de procuranda Indorum salute."

7) p. 100. Quae hic inserit [illegible]



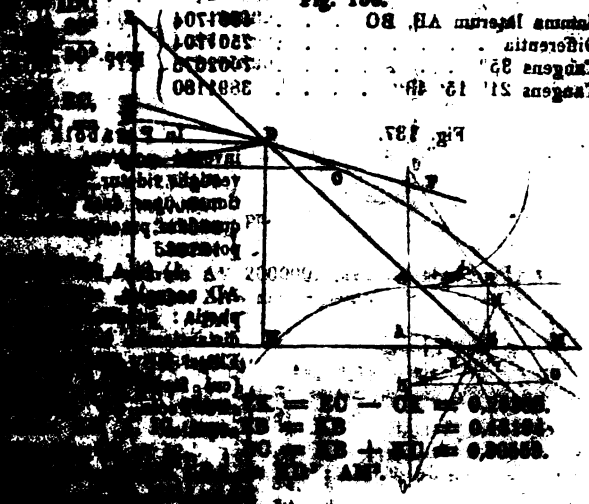
[illegible] (cum [illegible] Vol. [illegible] p. [illegible]) [illegible] Propositumque [illegible] [illegible] p. 181. [illegible]ximum. Primum prodit [illegible] [illegible] 1608. Praeter hanc [illegible]tionem [illegible] [illegible] Schaubinus [illegible] [illegible] [illegible] nihil [illegible] [illegible] de refractione [illegible] [illegible] circulo [illegible] &c. Quae Rothmanni [illegible] (in litteris d. Casellii d. 11. Oct. 1607), [illegible] [illegible] eam esse durum [illegible], sed [illegible] [illegible]. At in eo dissentimus, quod tu propter [illegible] Statis. h. e. in sphaeris coel. non [illegible] [illegible] &c. Eo ipso, quod caeris, refractionem [illegible] [illegible] concedis, radios ☉ punctum [illegible] [illegible] concedente dominatione digere, in quo refractio [illegible] [illegible] rectiadam reflectit. Assumito hoc, [illegible] [illegible] 50° aut 60° evanescere permittunt &c. [illegible] [illegible] alia plania occurrere obscuriora, [illegible] [illegible]

[illegible] refractionum absolverit, quanto studio quoquo- [illegible] de [illegible] vocabit [illegible] [illegible] refractionum [illegible] infra prodit [illegible] non plane sibi [illegible] testantur [illegible] fatetur. Joannes Remus in literis [illegible], addens: „quaeso te Tychonis observationes" &c. Ad haec Keplerus respondit [illegible] [illegible]tione. De pragmatia Tychonis [illegible] [illegible] quidquam cuiquam [illegible] [illegible] de Opticis; in Epitome [illegible], at [illegible] [illegible] me [illegible] [illegible]

[illegible], alias Lunae, alias fixis. Paginae [illegible]

				In Fixis.	
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Fig. 136.



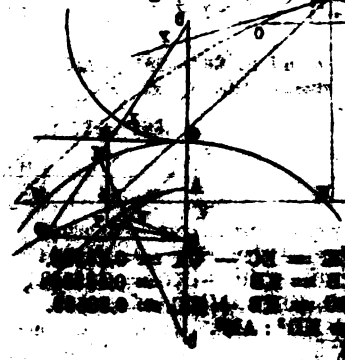
et FG, EA sint aequales. [illegible]
BG lateribus et angulo comprehenso [illegible]

Summa laterum AB, BG . .	128557[illegible]
Differentia laterum	[illegible]
Tang. ½ summae angulorum 35°	7002075
Tang. ½ diff. 21° 15′ 43″ . .	3891180

Atque ad hunc modum omnes angulos invenimus [illegible] non possunt. Eodem fere modo in Ellipsi p. 99 [illegible] AFB [illegible], BAF [illegible] erit AB 1000000, erunt AF 19[illegible] angulo [illegible] continuato latere BC in Q, [illegible] summae laterum [illegible] 3501704, et ducta recta AQ [illegible] quibus angulus IBC [illegible] aequatur.

Summa laterum AB, BQ . . .	4501704
Differentia	2501704
Tangens 35°	7002075
Tangens 21° 15′ 43″	3891180

Fig. 137.

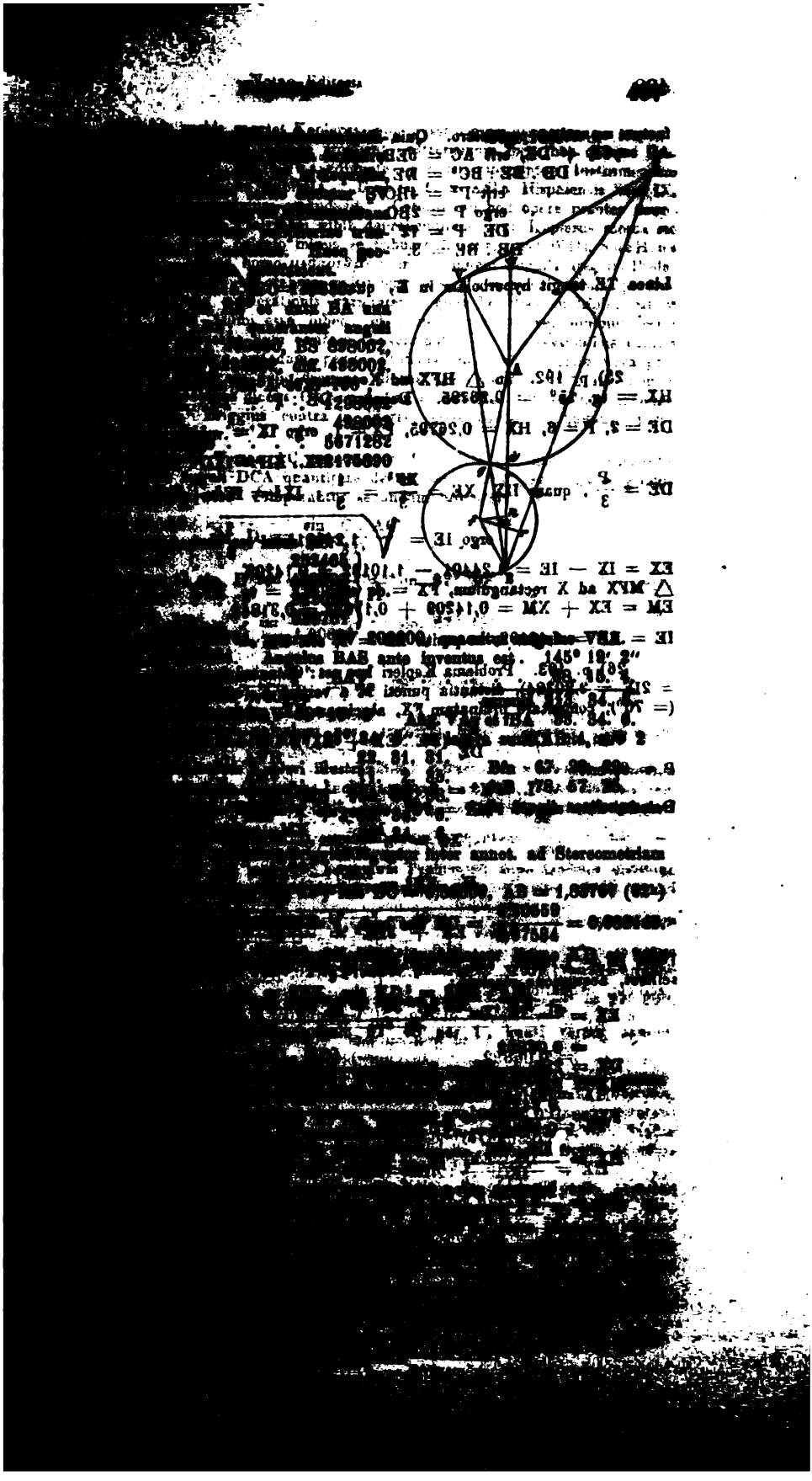


in Parabol[illegible] invenit [illegible] vestigiis videtur [illegible] tionem [illegible] quasdam [illegible] poterunt.

hinc) [illegible] A [illegible] AD aequa[illegible]

[illegible] — BC = [illegible]

[illegible]



factum ex [illegible] parametro. Quia [illegible]

$AC = CB + DE$, erit $AC = 5EB$; [illegible]

$DB \cdot BE : BC^2 = DE : [illegible]$

erit $P^2 = 4BC^2$; [illegible]

ergo $P = 2BC$; [illegible]

$DE \cdot P = 12$ [illegible]

$DB \cdot BE = 3$. [illegible]

Linea TE tangit hyperbolam in E, quae [illegible]

[illegible]

20), p. 192. In $\triangle$ HFX ad X rectangulo, [illegible]

$HX = \text{tg. } 15^\circ = 0{,}26795$. Deinde [illegible] $DE : P = 12$ [illegible]

$DE = 2$, $P = 6$, $HX = 0{,}26795$, [illegible] ergo $IX =$ [illegible]

$XM = XI$ [illegible]

$DE = \frac{P}{3}$, quam $DX \cdot XE = \frac{XP^2}{3} = \frac{1}{3}$; $IX^2 = HX^2$ [illegible]

ergo $IE = \sqrt{1{,}[illegible]}$ [illegible]

$EX = IX - IE = 1{,}24401 - 1{,}101$ [illegible]

$\triangle$ MFX ad X rectangulum, $FX = 4$ [illegible]

$EM = EX + XM = 0{,}14209 + 0{,}1$ [illegible]

$IE =$ [illegible]

20), p. 193. Problema Kepleri [illegible]

$= 2E$ [illegible] distantia puncti M [illegible]

(= [illegible] FX. [illegible]

[illegible]

$P =$ [illegible]

Deinde [illegible]

[illegible] Kepler: [illegible] tribunos [illegible] intuitus, quod Will. Snellius [illegible] Lungis apogaei Ptole- [illegible] multiplicem Lungis apogaei Ptole- [illegible] divisionis, [illegible] quadra- [illegible] quae hoc loco multiplex est et [illegible] cavero ne vel minimus error [illegible] consequant." 8. De [illegible] conicis [illegible] partim Ptolemaeum secutus, partim nova pro- [illegible] (Gilbert) [illegible] ad Gobrum", nisi nomen [illegible] Gobrum, cui ob nominis similitudinem tribuunt [illegible] in libris, quas supra exhibuimus, [illegible]

[illegible] AC semidiam. = 1 et DH alt. aëris = 0,00066, [illegible] DCA [illegible] altitudine decrescente a 90° per singulos gradus [illegible] secundum formulam:

[illegible]

Pars proportionalis angli NEG [illegible]

Quia ergo ad angulum NEF (88° 1' 10") [illegible]

[illegible]

[illegible] cum prima observatio [illegible] in △ BEA datur BA = 1, [illegible]

ergo sin. BEA ad [illegible]

∠ BEA = ∠ BEG = 50° 54' 22".

[illegible] Parallaxis [illegible] "[illegible] regulam falsi" adhibens „logisticam [illegible] [illegible] secundum [illegible] Cum ergo Tycho [illegible] [illegible] Tychonem) demonstrantur, [illegible] [illegible] (quae [illegible]

Pars proportionalis anguli NEG

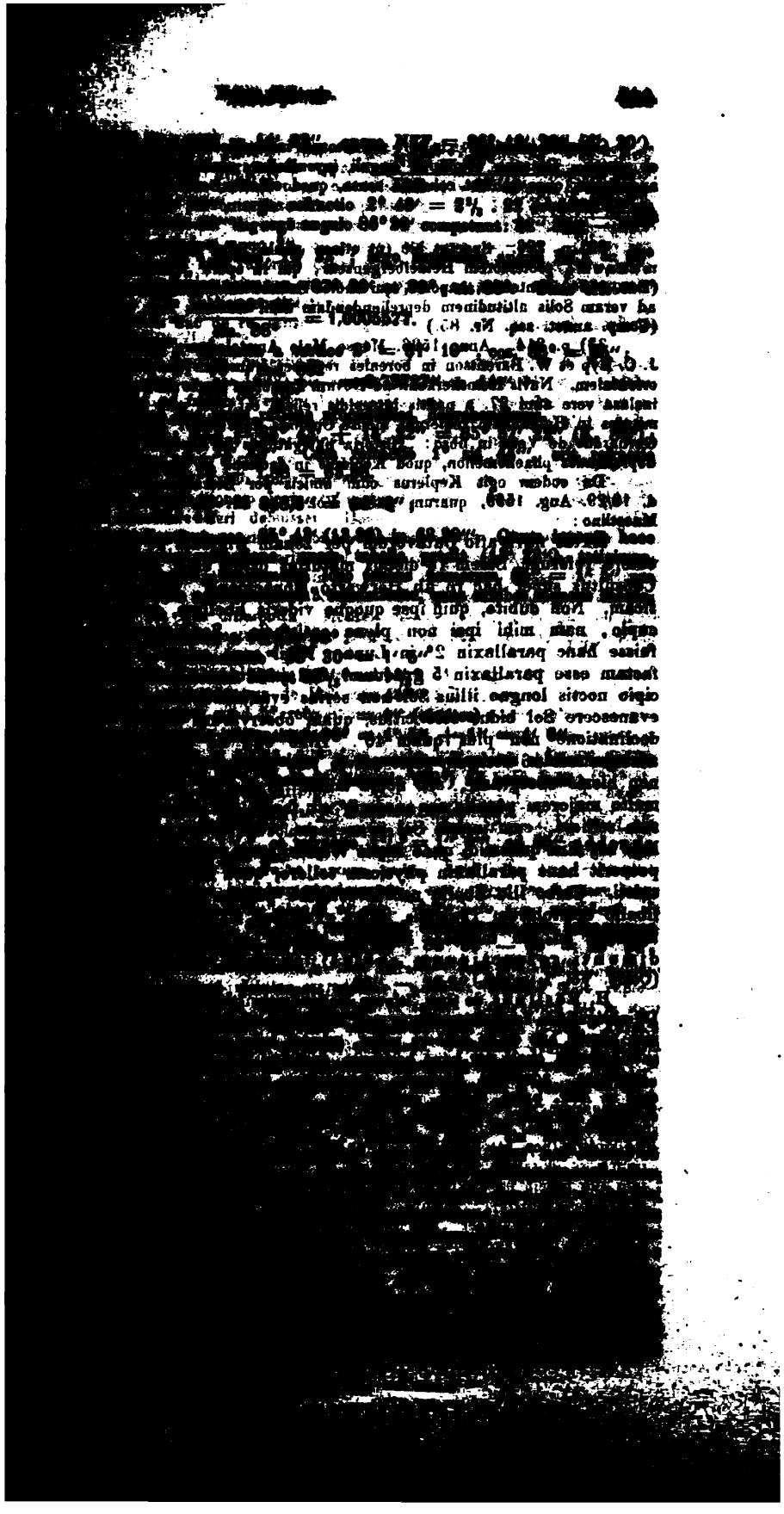
Cum ergo ad angulum NEF (88° 1' 10") pertinent 88,

potest: $\frac{81,568}{88,01944}$

Jam, cum prima observatio instituta sit

in △ BEA datur BA = 1, EA = 1,

ergo sin. BEA =



[illegible]
et [illegible]. Octantem [illegible] anguli [illegible] [illegible], quas [illegible] columna sexta, quod [illegible] ergo refractio 2° 40' = [illegible] ergo angulo 86° 29' competunt [illegible]

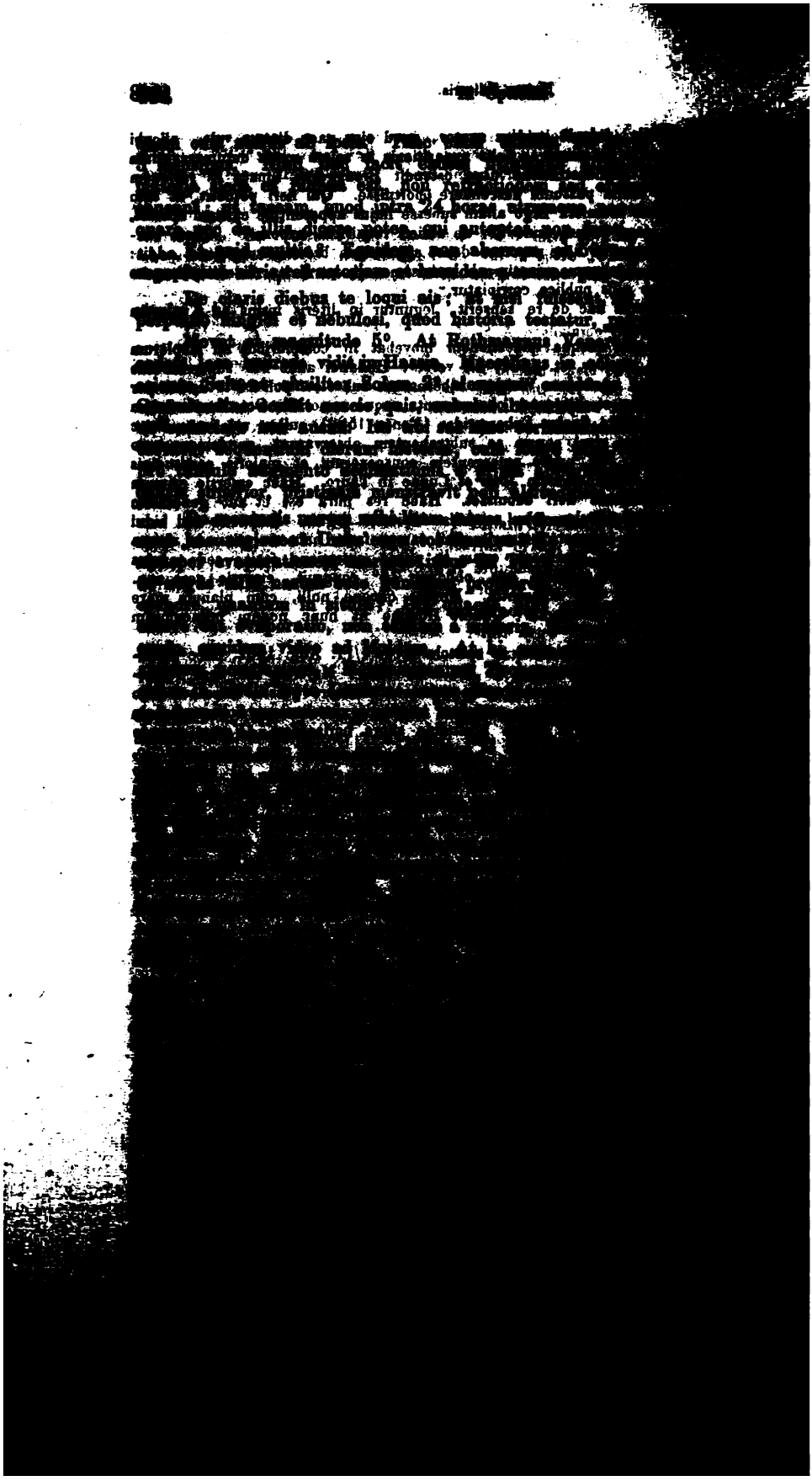
[illegible] Spectat hic (ut etiam [illegible]) [illegible] Heidelbergensem, qui in opere [illegible] (Bas. [illegible], impresso, qui [illegible] ad veram Solis altitudinem deprehendendam nihil [illegible] (Comp. annot. seq. Nr. 85.)

[illegible] Anno 1596. [illegible] J. C. Ryp et W. Barentsen in boreales regiones, [illegible] orientalem. Navis [illegible] insulam vere anni 97, a nautis [illegible] relicta [illegible] [illegible] de Veer in libro: [illegible] [illegible], quod Keplerus in [illegible]

De eodem egit Keplerus cum amicis [illegible] d. 19/29. Aug. 1599, quarum [illegible] Maestlino:

[illegible] Non dubito, quin ipse quoque videris [illegible] cupio, nam mihi ipsi non plane [illegible] fuisse hanc parallaxin 2° in [illegible] factam esse parallaxin 5 [illegible] cipio noctis longae illius [illegible] serius [illegible] evanescere Sol biduo [illegible] declinationis [illegible] plus [illegible]

[illegible]



[illegible]

illuminata. Propterea et causas experimenti [illegible] aquas minus de atro participare quam terras. Qui [illegible] cum terrae aquis tinctae nigriores evadant? etc. [illegible] quo minus te audiam, contra me disserentem etc. [illegible] do lucidas partes esse terram.

Pluribus de hoc agit in „Somnio" hunc in modum: [illegible] Terrestri globo statuendum est, oceanum et [illegible] induere, continentes vero et insulas luce Solis [illegible] in contrariam iveram sententiam, causa haec fuit; [illegible] induit colores, aquae colore vacare censebantur. [illegible] gradus est ad nigredinem. Sunt vero resplendent[illegible] obscuritati superficierum, unde repercutiuntur. [illegible] aquae. Nam utcunque quis superficies [illegible] et aquarum, semper nigrescunt terrae [illegible] colores terrarum, equidem rectius [illegible] nigrum gradus esse ad lucem puram. Quod [illegible] eam Aristoteles defendit expressis, aquae color[illegible] [illegible] a sensu visus, quod terra omnis [illegible] per calorem Solis clarius enitent. Experi[illegible] cum Pragae me [illegible] literis [illegible] [illegible] Galilaei [illegible] [illegible] in undis respiceres, easque [illegible] [illegible] et [illegible] Quod [illegible] [illegible]

[illegible] Tequanum [illegible] Pratiki anno [illegible]
[illegible] quo eumque chronologicis [illegible]
[illegible] de illo opere quem [illegible] Maria
[illegible] Die 24. Feb. quand videbitur [illegible]
[illegible] Eclipsim jam exoriturus, quae foste ejus Pratiki
[illegible] intuitionem minimam [illegible]
[illegible] 644.)
[illegible] pagis annot. 45. dicimus. Petrus Beinewitz
[illegible] Fr., Amstlod. ab anno 1529 in 1600
[illegible] astronomicis quae prodiunt
[illegible] ad interbaumam [illegible] geographiam
[illegible] cognomen Frisius; anno 1566 Lovanii
[illegible]
[illegible] Gap. XXII. [illegible]
[illegible] Lib. VI. parte V. N. 8.
[illegible] pag. [illegible] (ed. 1606) refert: Ritho Ch.
[illegible] per Germaniam et Bittanniam occidua dentitit.
[illegible] ab a. 1595 usq. 1546. 22. d. Apr.
[illegible] Wolfiide [illegible], [illegible] et obtutus apparuit
[illegible] pag. 494. hand dubio Typhoid Fieri
[illegible] Commentario in Sphaeram Pratiki
[illegible] fol. 156.) haec Haly Ben Hedoan
[illegible] figura (triple
[illegible] quarta
[illegible] in
[illegible] haec annotata sunt: ☉,
[illegible] Lodem hoc Cadanus
[illegible] in Scotia.
[illegible] Galliam non
[illegible] Rom. 1620. Ahmet,
[illegible] Europa respondit, aequatur
[illegible]
[illegible] $(\delta\delta') = 1$
[illegible]
[illegible] $\Delta\Delta'$ [illegible]
[illegible] $(\Delta\Delta') = 1$
[illegible]

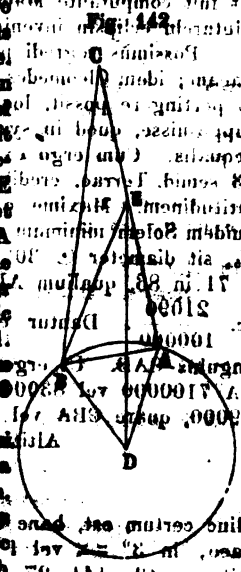
eam, quae per refractionem lumen admittunt, [illegible] illuminat universum, et non modo in sua media parte et [illegible] circumquaque declivibus et non ad Terram spectantibus [illegible] lumen, existente Luna, neque per refractionem, [illegible] sui ipsius corpore et radiis Solaribus. (Secundum [illegible] 65) p. 201. Ptolemaeus (De Astrorum Judiciis [illegible] 1541) lib. II. cap. 9. haec dicit de coloribus eclipsium: Si [illegible] videntur, significant ea, quae de ♄ natura exposuimus [illegible] Martius, flavus Veneris, varius ☿. Ad haec Cardanus [illegible] et jure merito, quomodo colores eclipsium fiant a [illegible] Tabulis Alphonsi et Linerii, eos potius in Sole fieri per [illegible] cauda draconis, et in Luna juxta distantiam ab apogaeo [illegible] ab ecliptica." His subjunxit Cardanus tabellas [illegible] quasi ad confirmanda ea quae supra dixerat. In his [illegible] gradus longitudinis Solis a nodo et distantiae Lunae [illegible] in croceum album, hi a nigro in rufum. Deinde [illegible] maeum, sed frustra. Nam colores in tabula [illegible] veluti ☉ a nodo ad primum gradum sit plane nigrum [illegible] carbo." &c.

Obiter hic notamus Cardanum in hoc opere [illegible] sollicitudinem proposuisse Christi nativitatem secundum [illegible]

De Linerio, quem dicit Cardanus, [illegible] saeculo XIV. Parisiis [illegible] rationibus (Comp. Gassendi Opera Vol. XI [illegible] observationes annorum 1350 et 1364 proponuntur [illegible] 60) p. 301. [illegible] Caesare Octaviano ad annum [illegible] 47) p. 300. Hist. Coel. p. 340 [illegible]

[illegible]

Fig. 142.



[illegible] Certe plus quam [illegible] [illegible] 28° et ex. I. 26°; [illegible]

Quinto, nota setatem Hipparchi. Ultima [illegible] [illegible] incidit in annum a. Ch. 127. At nemo [illegible] Luna, quia Alexandriae ipse, vero in Rhodo [illegible] διαστασις in a. C. 478. incidit. Oporteret examinare [illegible] certe etiam de Alexandria quamvis absens lucinter [illegible] drias aemulus utringue fuerint illuminatae. [illegible] Maestlinus non abludit, Sardibus contigit H. 1 [illegible] Et fuit computante Maestlino fere 11 digitorum [illegible] Plutarchi eclipsin invenire queamus? At haec [illegible]

Possimus regredi per συζυγιας. Primum [illegible] gaeam; idem Cleomedes confirmare videtur [illegible] ☽ pertingere possit, loquens poscul dubio de hac [illegible] supposuisse, quod in syzygiis in elongatione [illegible] aequalis. Cum ergo ex illa eclipsi inveneri [illegible] 83 semid. Terrae, credibile est mediocrem [illegible] latitudinem. Maxime quia deit in locis [illegible] quidem Solem minimum mutare. Cum ergo [illegible] ¼, sit diameter ☉ 30', erit [illegible] a 71 in 83, qualium AD 1, [illegible] qualium [illegible] sc. $\frac{21090}{100000}$. Dantur ergo in ABO [illegible] angulus CAB. Ut ergo AB ad ACB, [illegible] CA 7100000 vel 5300000 sin. ACB [illegible] 69990, quare CBA vel 36° vel 43° 30'.

Altitudo [illegible]

Hinc certum est, hanc [illegible] geo, in 3° [illegible] vel [illegible] igitur a. Ch. 141. 27 [illegible]

[illegible] in Chronologia [illegible]

[illegible] Mercati [illegible] Cap. 30.

[illegible] Hungaria) et in „Radio astronomica" [illegible]

[illegible] in Comment. in Sphaeram Joannis de S. Bosco

[illegible] 21 Aug. 1560. Tycho [illegible] Solis, [illegible] Sol [illegible] 5½ [illegible] in [illegible] Oberbaurat Tiedemannus Stella et Paulus [illegible] 24 [illegible] in Disp. de Eclipsibus (1596) Maestlinus T. Stellam et [illegible] autem Mercator sine dubio Paulum dicit [illegible] et astronomum, natum ante sec. XVI. [illegible] — De Tiedemanno [illegible] [illegible] von Nürnberg und [illegible] [illegible] 1544 [illegible] 1589 in Vol. XV [illegible] [illegible] Sermone [illegible]

[illegible] 1544. 24. JAN.

[illegible] Lunae h. 8. 59′ [illegible] Anem h. 10. 8′, in [illegible] ☉ 316. 8. 21. Declin. 16. 47. 47. [illegible] ☉ 39. 25. [illegible] 31. 29. [illegible] 12″, [illegible] ☉ [illegible] 29′ 17″. [illegible] 12′ [illegible] aequali [illegible] aequatio temporis hic yelcit 14′ 13″ [illegible] 34′ 37″ dat 60′, quia 14′ 34″ [illegible] 18″ add., [illegible] 2″ add. [illegible] prodit Gemma. [illegible] 32′ 57″ [illegible] under 17° 30′ ab [illegible] 22′ ♑, altitudo [illegible] habetur [illegible] declinatio eclipticae, relinquit [illegible]

[illegible] quantitas non magna. Computo [illegible] Gemmae non sit demenda, Luna [illegible] minor, eoque convellaretur hic angulus maxime. [illegible] Rhaetius et relatio est de tenebris Solis [illegible] pingit partem praecise superiorem, quod est [illegible] et denique Alphonsinae, quae defectum septentrionalem [illegible] magno defectu fieri potest, ut sit partem latitudinis [illegible] trionali australem facit.

Eclipsis Solis 1560.

Lorenii observavit Cornelius Gemma initium [illegible] digitos [illegible] per medium [illegible] [illegible] observavit. Initium h. [illegible] 52½ finem h. 2. 17 [illegible] Fabricius, et Tielemannus Stella observavit [illegible] et in hoc Nonagesimo.

Convertere totius vita à Cielo, [illegible] tempore, ut nemo vel pedem [illegible] [illegible] Horae 1. 24. Lorenii est [illegible] aequali sumtum, locus Solis est [illegible] 45 [illegible] et 30° [illegible] Ash. Obliquitas 23° 12′ [illegible] verticalitatis 0° [illegible] plane rectus, eoque angulus [illegible]

Calculus prodit digitos non plane [illegible] is recte explicetur, de parte residua. [illegible] [illegible] 13½ in ortum, ita [illegible] 36. 35 dat 60 minuta, [illegible] [illegible] 34′, [illegible] Lorenii [illegible]

[illegible] Tiberius et Tiberius [illegible]

[illegible] Dans lat. 29′ 20″; per hanc jam locus com-

[illegible] 13; add. 90° prodeunt 262° 24′

			29. 20
	6. 34	Par. lat.	40. 42
	30. 7	[illegible]	11. 22
	22. [illegible]	semid.	31. 15
	7. 42. 30		
	7. 12. 57		

[illegible] ad asc. oblic. 20° 45′, erit 283° 9′.

[illegible] 22′ 31″, summa 20′ 11″; ☉ 7° 45′ 54″;

[illegible] Verba per additionem [illegible] per parallaxes

[illegible] parallaxis longitud. 56′ 10″, a vera longit.

[illegible]	1. 527	
[illegible]	1. 986	
[illegible]	3. 513.	

[illegible] Stilbido Solis [illegible]

[illegible] Cum ergo in [illegible] hor. [illegible]

[illegible] Sole alius quam 7° 45′ 54″ ♏ ascen.

[illegible] 45′ 54″, eoque lat.

[illegible] 28′ 11″. Eoque ☽ in 8° 14. 5. in

[illegible]

Exactius ista pro diff. meridi

Locus Solis	12. 32. 45
Redactio	4. 46. 45
Quasi requisitus	7. 37.
Summa secundi	31. 15
Visus	8. 18.
Parall. in ortum	8. 16
Visus non vera	8. 15
Levamen	
Visus	8. 16
	31. 15
Superatio nda minor	23. 58
Umbrae	31. 15

[illegible]

gratiam duarum eclipsium, quod plurimum aliarum [illegible]
[illegible] mihi [illegible] multiplicatione [illegible]
chartarum, de qua in libro de Stella nova Cap. [illegible]
[illegible] Ego comprehendi in Gnyibra [illegible]
[illegible] Clavis observatio [illegible] Romana [illegible]
[illegible] Clavis [illegible]
[illegible] observationem [illegible]
[illegible] Lunam [illegible] Solis [illegible]
[illegible] Romanis epistolis [illegible]
locutus sum super hisce eclipsibus: igitur non libentes [illegible]
[illegible] 1601 [illegible]
Luna in apogaeo minor. Quid ergo [illegible]
[illegible] 1602 [illegible]
[illegible] Solis in [illegible]
[illegible]

Uraniburgi est 12. 11. Quod vero Lovanii est 12. 10. Haec magis consentiunt observatis Tychonis, [illegible] semper h. 12. 8 vel 12. 10. Ergo [illegible] Uraniburgi ad eam spatio adhibuerit. Est enim [illegible] ad destinata loca veniat, quam sine ea. [illegible] A. 1597. Mirum omnino. Potius enim hac vice 12 [illegible] ut observationes trium locorum tempestatis [illegible] Optimum sit scripsem medium [illegible] Eclipsis latitudo exquirere videtur tempus maturius [illegible] Eclipsis distractis 32', ut sit h. 11. 54.

Uraniburgi.

Lat. aeq. 64. 48

Visus hor. ☽ a ☉ 24. 25

h. 0. 12. 49 (154322)

12. 26. 25

12. 39. 14

II. 25. Jun. 1620.

1620	19.	15.	7.	31	—	9.	13.	54.	18.	54.
Mart.	98.	0.	6.	49						
d. 69	117.	15.	14.	20						
Rev. IV	116.	15.	14.	20	—	0.	12.	18.	47.	[illegible]
	7.	10.	0.	0	—	9.	26.	10.	50.	8 — 7.
						3.	2.	44.	[illegible]	
						0.	23.	55.	[illegible]	
								1.	[illegible]	
					Locus ecl.	28.	56.	[illegible]		

Fuit vera ☉ ante horam dimidiam. Horarius fictus 38. [illegible]

[illegible] ♈ computo.

Accurate tempora astronomica ☉ [illegible] Michaeli de Romula, sunt minus sub [illegible]

Asc. R. ☉ 1. 18. 32 [illegible]

1. 55. 51 [illegible]

Fuit ☉ [illegible]

Tempore priori erat angulus minor [illegible] dinem penitus absorpsit. [illegible]

Proba: 10 minuta horaria 33′ 7″ [illegible]

26° 49′ 34″ 48″ ☉ [illegible] 15″ ♈ [illegible]

♎ 4. 17. 50 [illegible] 28. 54. [illegible]

[illegible] 10″

[illegible] ☽ 25. 40. [illegible]

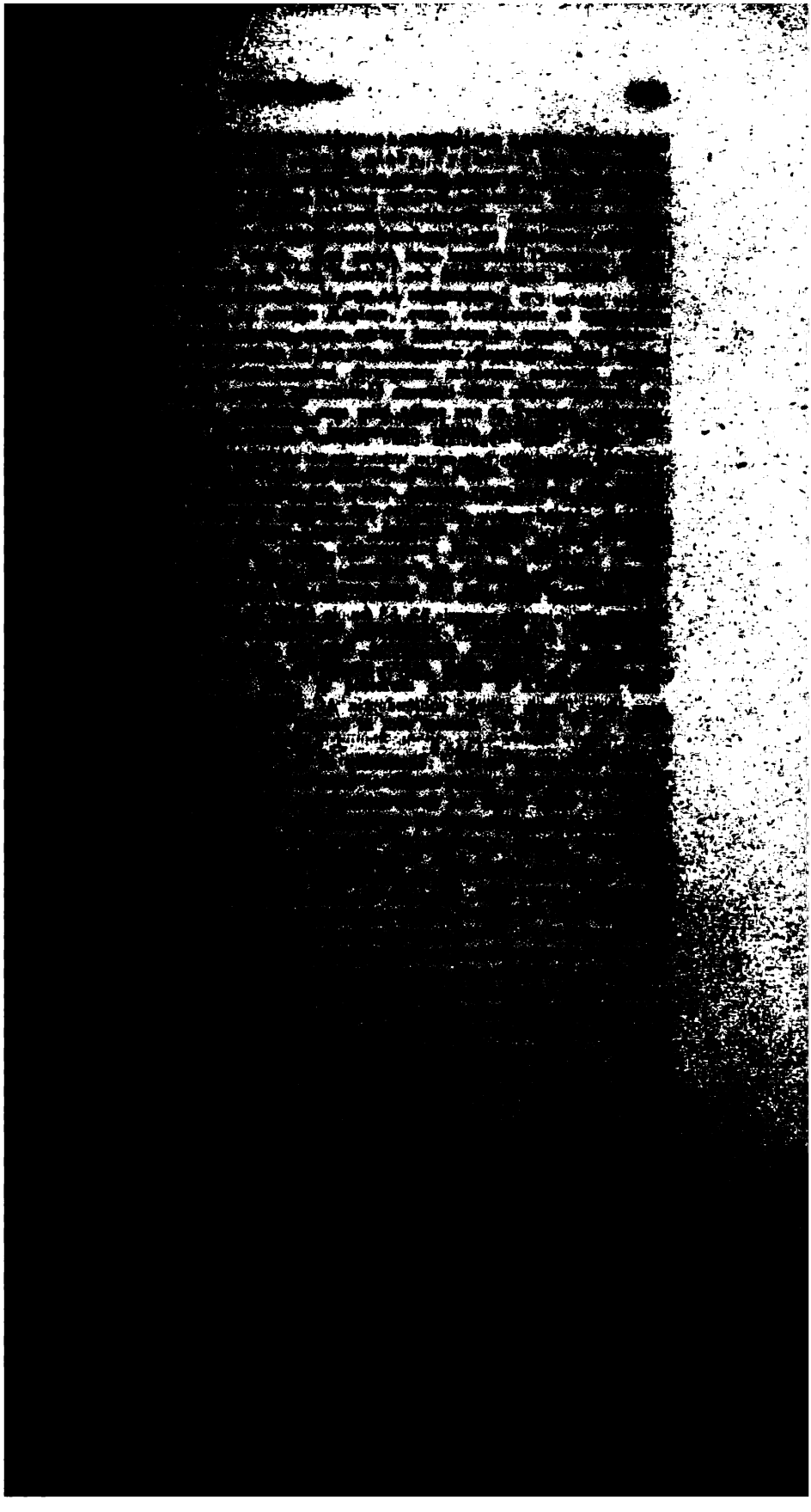
☉ 23. 58. [illegible]

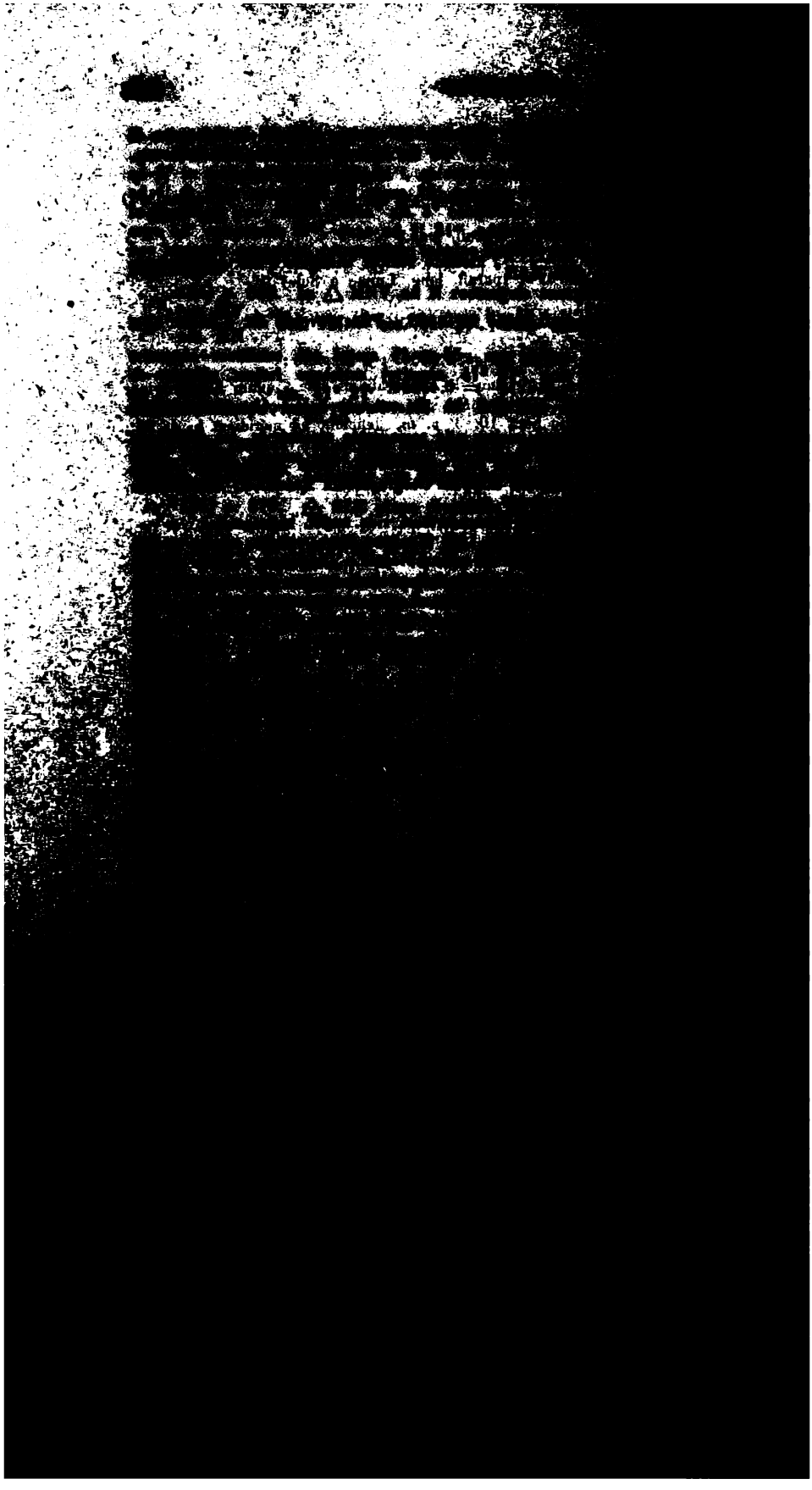
Ego ut verum fateor ita perplexus redditus sum hoc argumento [illegible] ut fere dubitem de tota doctrina triangulorum. Nisi tu [illegible] ipsius nodum mature mihi dissolveris, [illegible] de me [illegible]

Credo te librum [illegible], aliis [illegible] exemplaribus [illegible] hunc scriptum commodo adnoverit, insignus mihi [illegible] illius Scriptoris parum tuum, et [illegible] dubia, quod [illegible] tamen hac illius argumento moveor, [illegible] assumtis vel [illegible] ribus. Retractionem quidem concedit, at eam nullam differ[illegible] ad centrum Solis respectus fiat. Verum observationes alti[illegible] a meridiano remotionibus, haec aliter haud dubio extendun[illegible] p. m. tales observationes plurimas, [illegible] Facerpe igitur, mi Kepler, utilissimam et gloriosam [illegible] nova paradoxa refutares; atque ille multos vel [illegible] Scriptorum [illegible] inventorum non [illegible] adeum in obliquangulis. Sed tanm judicium [illegible] in apud me, [illegible] Uranici [illegible] [illegible] Paulinum et Johannem Fabrum, [illegible] pervenisse, praedicans ces singulares [illegible] ne interpretive Magni illius Technoli [illegible] quandam absurdus non hic sed potius [illegible] [illegible] manes, studiumque interessum in [illegible] quam mandatis apud me depraedicarit [illegible]

Kepleum, nemo statim respondentem [illegible] 28 Augusto et 1602 datis quam [illegible] jam deperditis) neglexisse videretur, instat Fabricius [illegible]

Keplerus in responsionibus suis (d. 1. Oct. [illegible]



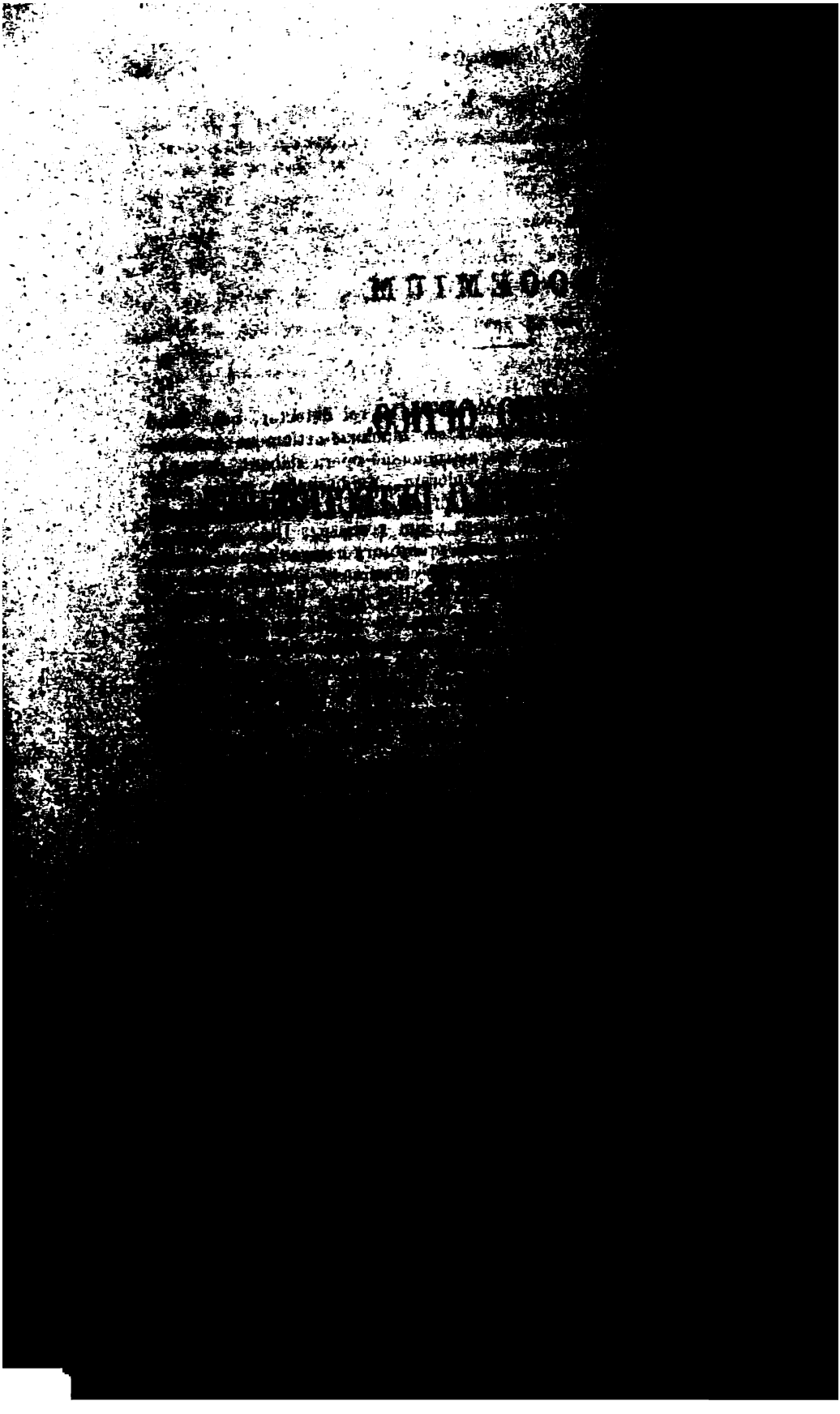


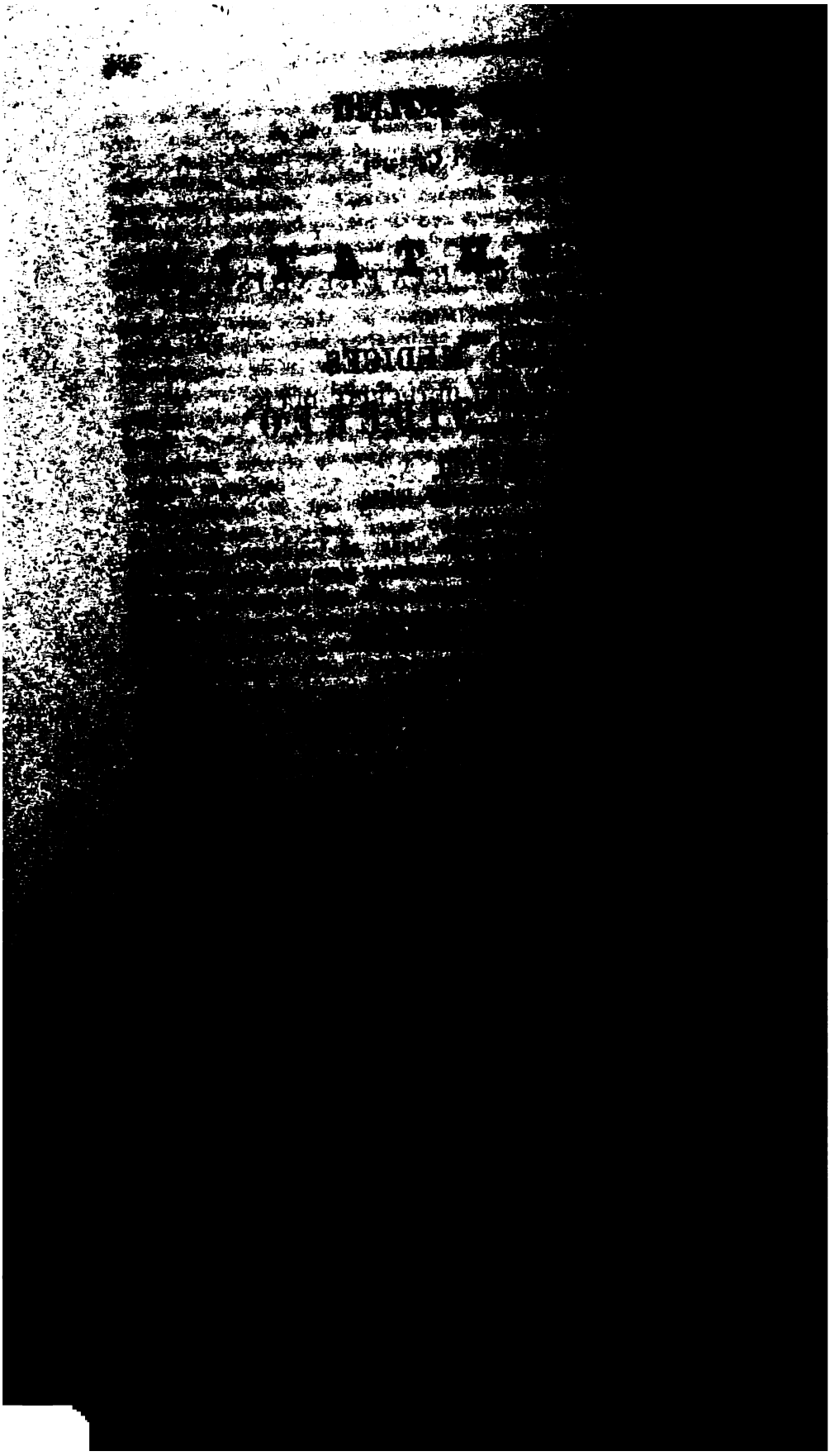
[illegible]

DE TUBO OPTICO.

DE GALILAEI IN COELO DETECTIONIBUS.

DIOPTRICE.





ILLUSTRISSIMO ET REVERENDISSIMO

Domino Domino

JULIANO MEDICES

SERENISSIMI MAGNI HETRURIAE DUCIS

Apud S^m. C^m. M^tem.

ORATORI,

Domino meo Colendissimo.

Illustrissime Domine, Epistolam hanc meam ad Galilaeum Galilaeum, ssorem mathematicum in celeberrima academia Patavina de Nuncio ejus eo perscriptam et jam typis descriptam, cui potius inscribam, quam D^i T^ae non invenio. Tu enim exarandae illius auctor mihi fuisti m transmisso ad me VI. Id. Aprilis per Thomam Segethum exemplari ii Siderei, et die mihi dicto ad Idus, quo Te convenirem: post ut arui, praelecta mihi ex literis ad Te Galilaei postulatione tuaque ad- a cohortatione: qua percepta et promisi me intra diem, quo solent cursores, exaraturum aliquid et praestiti. Sed et nuper admodum , cum obvium habuisses, diligenter petiisti, ut exemplum epistolae si retinuissem Tibi concederem legendum: ipsam quippe epistolam, quam- apertam exhibuissem, per occupationes illius diei non potuisse cognos- quod rursum promisi me facturum primum atque ad mundum descrip- m. Concepi autem illam initio et jam typis expressi tanto libentius, et Galilaeus, ad quem illa destinabatur, Mediceorum cliens esset Medicei principis Magni Hetruriae Ducis Legatus, ipse quoque gente liceus hoc a me peteret; et denique materia, de qua scribendum , esset ejusmodi, qua (siquidem vera traderentur) Medicei nominis s auctoris consilio comprehenderetur.

Accipe igitur Illustriss^e D^e ex privata et Galilaei propria publicam riptione factam, publica dicatione jam Tuam: exque hac dedicatione um meum in veritate et, quod hac sola nititur, Medicei principatus re post Galilaeum auctorem asserendo cognosce; meumque erga Ill. . animum ad obsequia paratissimum aestima. Denique me inter clientes numera. Vale. V. Non. Majas. Anno Christi Domini MDCX.

Ill. D. T.

ad obsequia devotus

Joannes Keplerus,
S. C. M. Mathematicus.

AD [illegible]

Cum [illegible] sententiam meam super [illegible] [illegible] omnibus hoc opere [illegible] [illegible] (tempore quidem festinatione [illegible] [illegible] diem fecisse) publicis typis [illegible] [illegible] jam excusa monuerunt [illegible] [illegible] videri possint [illegible] [illegible] consilium [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

ut multis non ingenii hebetudo sed doctoris culpa impedimento sit, minus scripta et demonstrata percipiant: eis igitur ut consulerem qua hic tradidi brevius, alia prolixius, nonnulla aliis verbis concepi; definit terminorum, quos usurpo geometrica libertate, continuo numero inter positiones opportunis locis recensui; schemata (quae sunt geometr genuinae literae) plura addidi. Qua opera si non omnem obscurit sustuli, spero philosophiae studiosos imbecillitati meae aliquid condona operamque hanc boni consulturos.

Porro in hanc curam eo potissimum tempore incubui, quo inge meum lamentabili quodam frigore torpens [18]) Sol munificentissimus p sentiae R^mae.^ et S^ae.^ C^is.^ Tuae concalefecit, clementissimaque Ejus quia et hortatus crebri veluti Mercurius aliquis e somno excitarunt; denique mathematici et cubicularii nobilis D. Joannis Zuckmesseri ju dissima simul et ingeniosissima machinamenta manuaria vitrorumque exp tiones artificiosissimae, quibus R. S. C. Tuam mirifice delectari videt ad ejusdem veluti officii aemulationem provocarunt. [19]) Quodsi me impellerent hae singulares causae ad Dioptricen hanc meam R. et S. Tuae dedicandam: tunc vel sola illa in genere sufficeret, quod mathema libelli, ut remoti a vulgi captu eoque contemti, nemini rectius offerun quam qui de illis judicare possunt; quos acri ingenio a natura instruc amor philosophiae et meditatio ad perfectam harum rerum cognition provexit. Qua in cognitione num quem inter Principes Viros hoc temp parem habeas, incompertum mihi est: inter professores certe academiar qui huic judicio pares sint, pauciores reperiuntur, quam ex usu sit.

Quodsi nulla in creberrimis librorum dedicationibus fucatiora ess patronorum encomia, quam sunt ista, credo fidem, quam circa patronor virtutes fere decoxerunt dedicationes, brevi restaurarent. Atque ego hunc ipsum finem supersedeo reliquas (ut fieri solet in dedicationibus) et S. C. Tuae commemorare virtutes, ne sutor ultra crepidam sap velle videar.

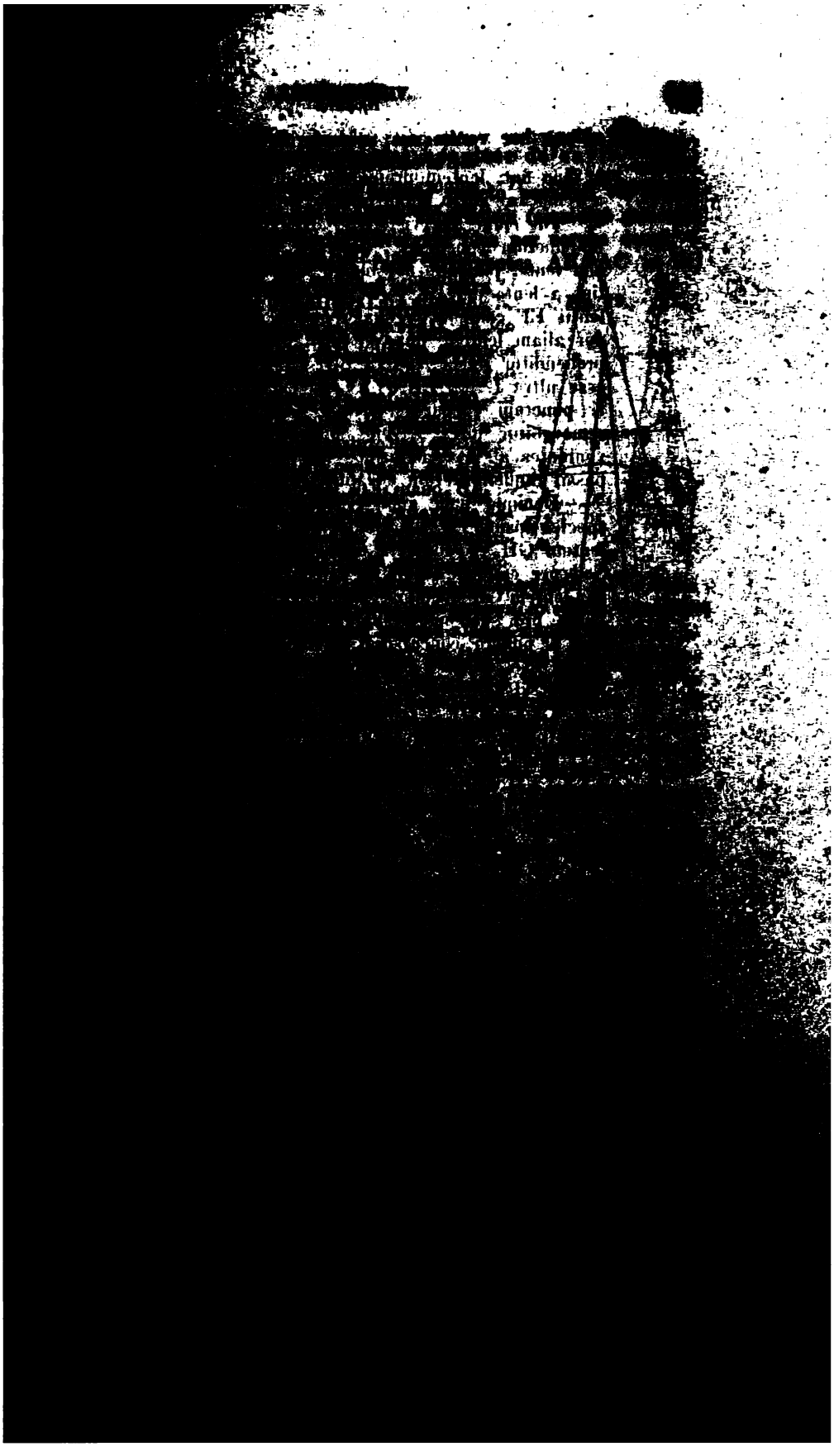
De cetero non aliam lectori suspendo hederam, quam ut ei indice libellum a tali principe comprobatum lucemque videre jussum. Et jam et S. C. T^ae.^ me subjectissime commendo. Vale. Cal. Januariis a undecimi de seculo septimo decimo: quem R. et S. C. T^ae.^ felicissimum gubernatione, in sapientiae studio, inque corporis tuenda sanitate comprec

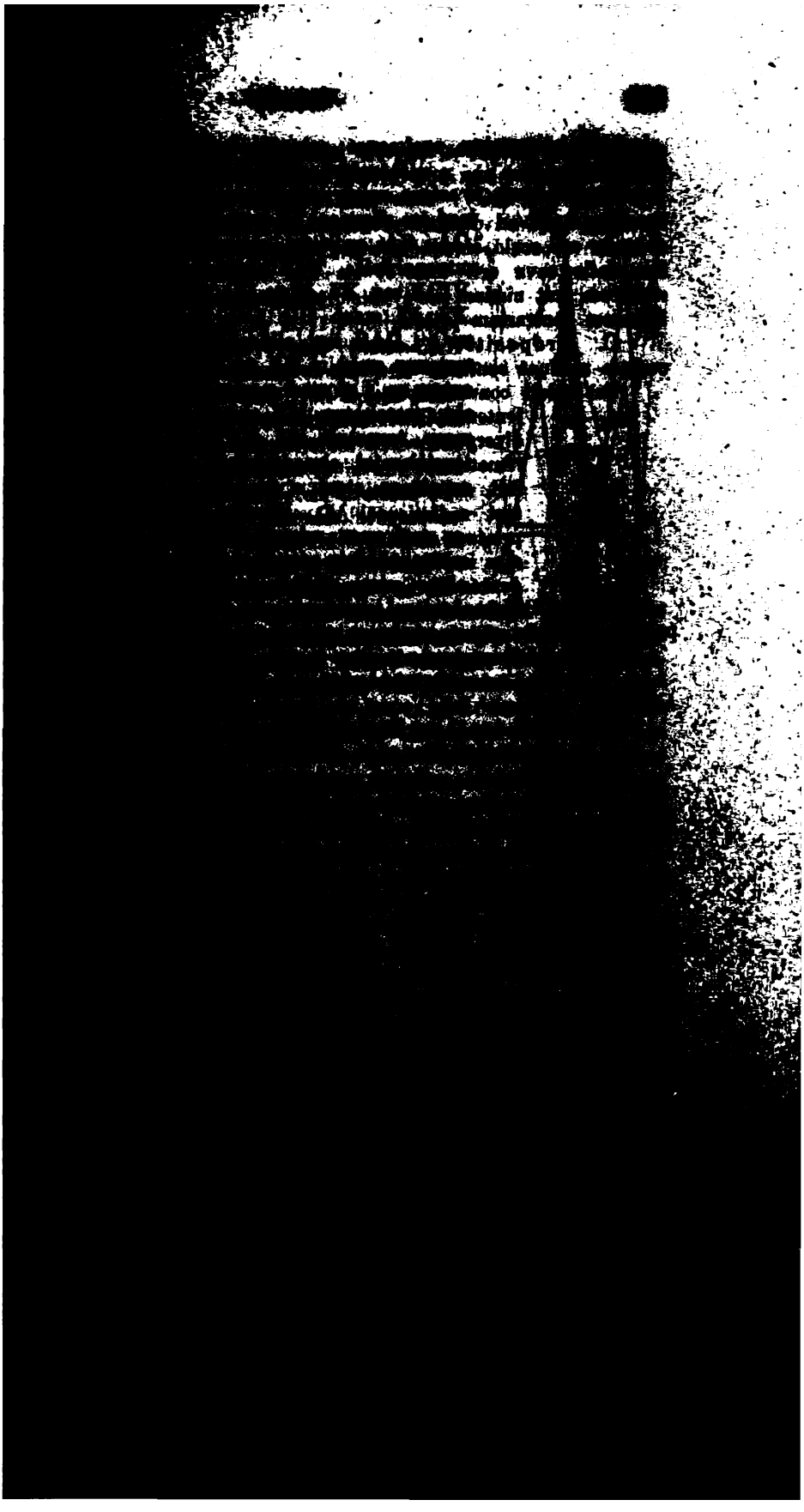
Reverendissimae et Serenissimae C. T^ae.^

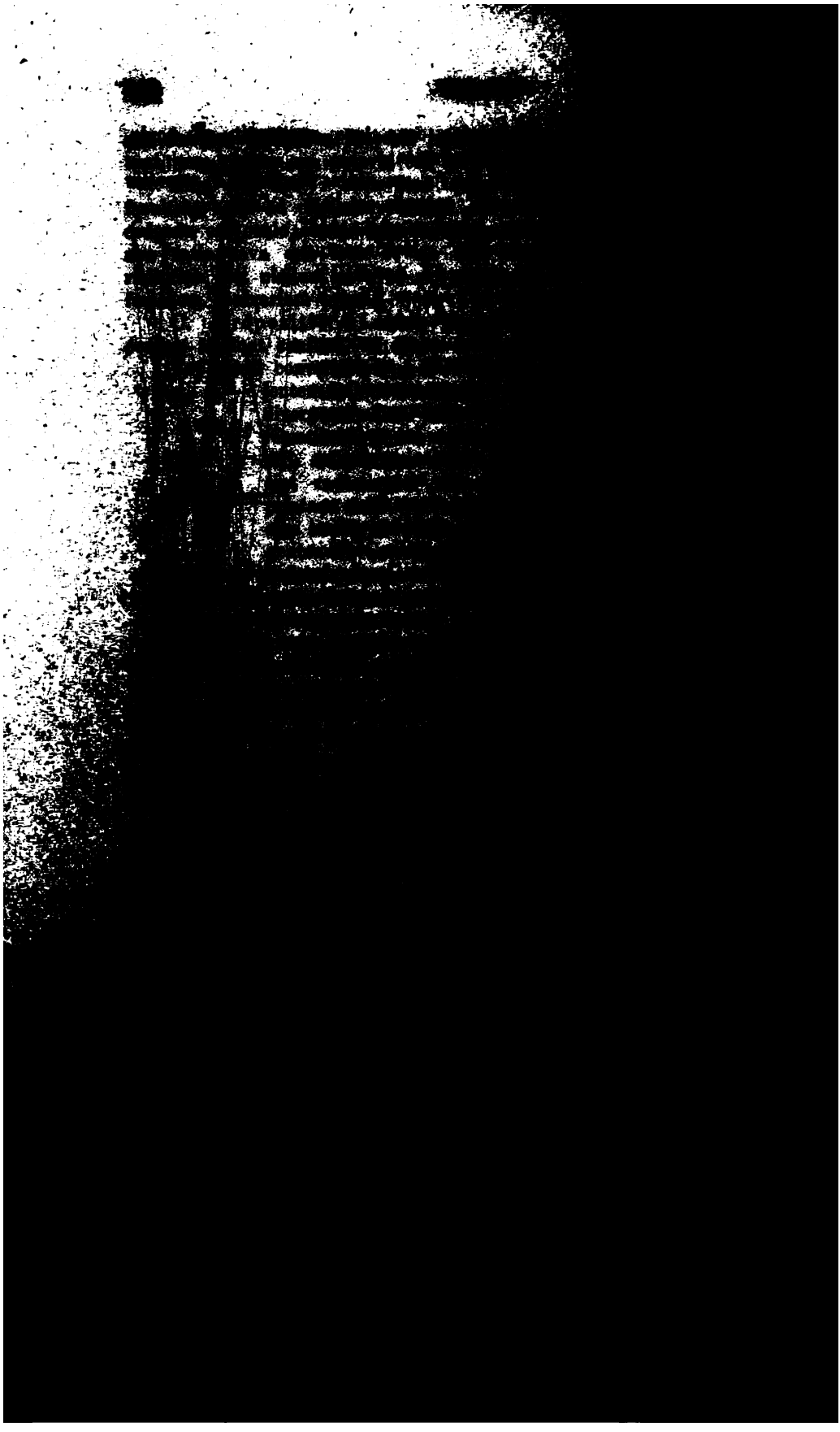
Devotissimus

S. C. M^tatis.^ Mathematicus

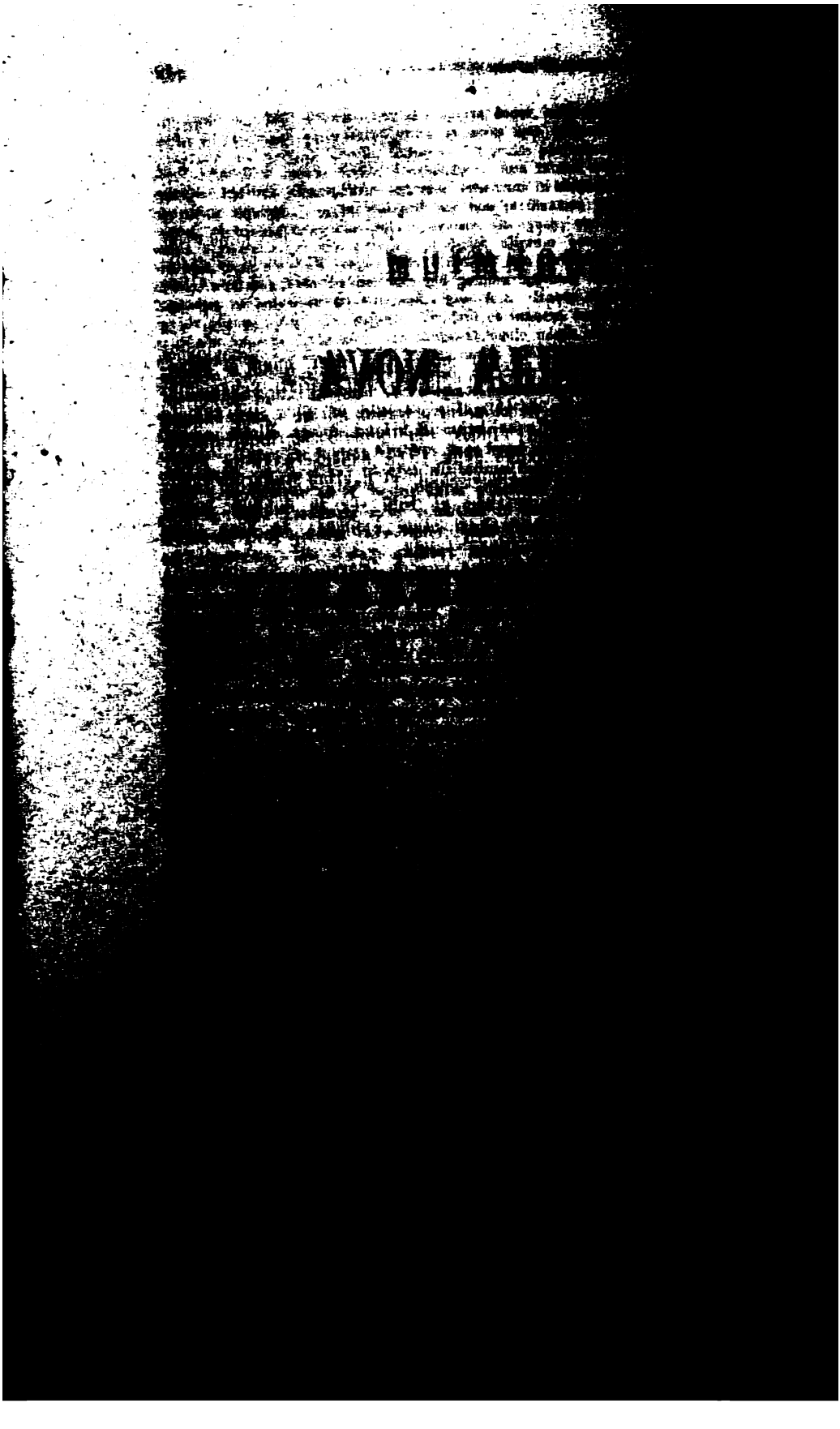
Joannes Keplerus.







ELLA NOVA



PROOEMIUM

[illegible] in coelo stellae conspectae erant, quum et astro-
[illegible] rerum coelestium cognitione non initiati vehementer
[illegible] ingenia excitabantur ad rem novam, sive cometa
[illegible] stella, libris inquirendam et illustrandam.
[illegible], nova maxime anno 1572 conspecta stella exci-
[illegible] darat coelo cognoscendo et fixarum stellarum tabu-
[illegible] ne posthac ut tum res in dubium vocari
[illegible] quodcunque in conspectum veniens, re vera nova
[illegible] apparerent adnumeranda.

[illegible] quod Keplerus quoque sparso novae stellae in
[illegible] non penitus perspicere suum esse dixit, et, si
[illegible] suum aliorumque usum convertere studuit. Jam quae
[illegible] hoc libro anno 1606. Pragae et Franko-
[illegible] haec quae ad vulgi captum sufficere videbantur,
[illegible] conscripta anno superiore „Prognostico“
[illegible] dicitur disquisitionem de alia stella in
[illegible] cauda interponens singulari inscriptam titulo
[illegible] stella in Serpentario. Ella a pagina 148—168
[illegible] de Stella in Serpentario (p. 169—212.
[illegible] novum titulum causamque translati Pragae
[illegible] libellus temporum difficultate
[illegible]

magnae in trigono igneo conjunctionis, tam m[illegible]
vehementer agitatae. Rem autem a Keplero [illegible]
non possimus non incorruptum liberumque viri [illegible]
moto clariore disciplinae lumine superstitionis [illegible]
quidem magis mirandum fuit in Keplero, qui [illegible]
astrologicis maxime somniis dediti, quae nutriri [illegible]
putares in libro huic imp. Imperatori dedicat[illegible]
affert: „Etsi astrologia [illegible]
est, in qua bonae horae collocentur, quia tamen [illegible]
est, sed potissimam partem generis humani [illegible]
communem loqui videatur, qui mathematicas [illegible]
tradit, non possum supersedere quin ab [illegible]
memoratione auspicer. Dicendum est [illegible]
examinandum vero ad libellam veritatis [illegible]
rentur, habeantque astrologi, quid de [illegible]
quem de artis ignorantia accusare non [illegible]
eptis id unum tenet et geometrica ratione [illegible]
certa quadam ratione positi e Terra [illegible]
cui vitam quandam sensumque tribuit [illegible]
sonorum concentu. Cap. VIII. dicit [illegible]
[illegible] ut agentia naturalia, virtu[illegible]
rei cognoscendi, sed sic movent [illegible]
oculos sonus auditum, calor tactum [illegible]
Keplerus igitur rejicit illam [illegible]
[illegible] vim trigoni seu triplicitatis [illegible]
[illegible] rejicit magnitudinem quod [illegible]
bant momentum, nec ullam vim [illegible]
[illegible]

[illegible] (Cap. VII.) [illegible] tria reducit signa, ab auctoribus sub [illegible] superiorum planetarum praesupposita [illegible] (cum eisque incognita) natura rerum sublunarium [illegible] nihil nondum eripuit, etsi plerisque quae [illegible] solaris et secundum valorem argumentorum [illegible] scribi. Verum his comparanda sunt, quae [illegible] astrologiam attinet, equidem fateor, virum illum [illegible] veterum et cupiditati praedictionum alicubi nimium [illegible] praeter rationem abripi; verum inter [illegible] turba communia habet. Quo nomine vel [illegible] singulis delicatulis philosophis, ab [illegible] quorum, occulta illa, qualia tibi videtur, naenia [illegible] delitum illa apud hominum coetus longe [illegible] nisi per hujus simplicitatis interpretationem [illegible] quae est vis vocis apud astrologos ebbq [illegible] duonorum et octogenorum annorum. [illegible] ejusmodi magnus periodus, radiusque signi [illegible] quoque magnis terrae terrestrium motibus insignis [illegible] terrestrium motus effici planetarum [illegible] mutatione habet incertitudinis in signis [illegible] quanto insignior, quanto avidius vulgus [illegible] notitiam expetit, quam philosophiam [illegible] omnis hujusmodi descriptio, [illegible] ejusmodi periculum, [illegible] coelo visibilium cujus, [illegible] omnes facultates [illegible] naturalium [illegible] facultatem [illegible] generis [illegible] credidit [illegible] nonnulla [illegible]

earum difficultates Keplerus egregie
autem sem. Iriotami) sententiam firmitas
Telluris globo geminam facultatem
occultae concentionis sedes, alteram
dam quasi [illegible] Hanc facultatem
planeta
harmon
tibus e
vicisim
Verisim
pertend
stare,
libella
eum s
cuiuve
„Itaqu
ipsius
Di
quae
existim
eum
eqn
cons
Di
facil

[illegible] Keplori verba. — Alioquin enim [illegible] sint, sed etiam [illegible] astrologiae collectum spectum [illegible] astrologorum sententiis delatus ad Rectitudinem [illegible] magni siderum conditate (Cap. 30). Itaque [illegible] quibus acerbius recribere Keplerus [illegible]

[illegible] scintillationem, materiis, orta novae stellae. Quod [illegible] causas scintillationis a Scaligero pro[illegible], sideris, aëris; claritatem et magnitudinem sideris. [illegible] verbis: nihil potuisset omnes hae causae [illegible] accipere stellae motu vel facultate interna [illegible] causas scintillationum et colorum inquisivit. [illegible] magna verisimilitudine, [illegible] quam frigore facit inopes, ut [illegible] rediberit. [illegible] diversas sententias affert; comparat eum cum [illegible] de materia in [illegible] (absente Luna), comparem [illegible] in toto Sole [illegible] prope Solem comparante [illegible] uxore sua [illegible] eamque intus pulverulento [illegible] vocos apponit mihi et [illegible] aëre contortus [illegible] sed non hoc decoro [illegible] sententias meas defendendum. [illegible]

[illegible] Cap. XV—XXIII. [illegible]
in sphaeram [illegible] repetandum [illegible]
Keplerus Copernicanam mundi rationem [illegible]
[illegible] infinitasque illius adversarios [illegible]
[illegible] Copernici incredibilem celeritatem [illegible]
Ptolemaeique et Tychonica ratione celeritatem [illegible]
digna predit de mundi quantitate innixa (Copernicus
hominis [illegible] esse, ut [illegible]
[illegible] ex hypothesibus pro vera [illegible]
[illegible] fundites ingenium capit. [illegible]
[illegible] Keplerii libellum de nova in Cygno [illegible]
[illegible] Stella innotuerunt. Ille [illegible]
[illegible] Keplero tempus [illegible]
spectante. Quasi [illegible] immutata [illegible]
[illegible] in Cygno computaverunt [illegible]
[illegible] Stellam [illegible]
[illegible]

Quae Keplerus de stella in Sagittario
Keplerus e. g. March 1605. haec [illegible]
[illegible] observationibus Roeslini [illegible]
in Bohemia 28 Sept. vel 8 Oct. [illegible]
[illegible] 30 Sept. vel 10 Oct. [illegible]
[illegible] Brunowsky, qui [illegible]
[illegible]

[illegible] animadvertitur. Quae [illegible] Saxoniae [illegible] apparuit [illegible] candida [illegible] gradibus [illegible] Sed de ea jam satis; [illegible] Cygno). [illegible] Keplerus haec scripsit (d. 12. Jan. [illegible]) [illegible] et honorifice de meis studiis. Ego vero [illegible] manuscripta colligere [illegible] quam proposuimus supra p. [illegible], d. 27. Apr. [illegible] praestiti. Nam per tres menses abfui in Styria, [illegible] d. 29. Sept. 1605, quam in exordio scribit: Literas [illegible] Sept., cum praecedente nocte [illegible] Styria [illegible]) [illegible] perscripsi superius (Calendaria et [illegible] negotia [illegible] stellae Novae, et quia [illegible] res [illegible] futura [illegible] coepi legere [illegible] Keplerus [illegible] apparuisse [illegible] hab ich [illegible]

[illegible]

[illegible] Dei, volentis loqui [illegible] absurdum, [illegible] Deus [illegible] formata [illegible] certis [illegible] gentis, qui [illegible] amplitudinem extendunt;[2] est enim [illegible] pars orbis Terrarum; et loqui [illegible] principiis. Itaque his datis, quae [illegible] plane [illegible] posita [illegible] melius instituet compa- [illegible] ecclesiae, praesertim hodiernae Romanae; [illegible] episcopos, planetae, sacramenta, [illegible], Magos, [illegible] quod non [illegible] novum et extraordinarium [illegible] stella fuit [illegible] stella [illegible]

[illegible]

[illegible] Cap. 47. (In Comment. [illegible] multa scribit, sed [illegible]

[illegible] patrum in genere patrum et filiorum scribit [illegible] Contali filiorum mecum themata cum [illegible] secundogenito filio primogenito cadit [illegible] filius [illegible] filio [illegible] filio [illegible] filio [illegible]

[illegible] ut non [illegible]
percipi igitur [illegible] quod [illegible]
nullo rationis subjecto seu objecto moveant [illegible]
[illegible] respectu sympathiae coeli et Terrae [illegible]
[illegible] cum haec sit formalis potius et [illegible]
extraordinarios quintilem, biquintilem et [illegible]
meteorologica comprobatos habet, [illegible]
[illegible] sextum seu duodecimam partem [illegible]
[illegible] signat novam harmoniam. Nam [illegible]
[illegible] sit quasque. Ut enim in [illegible]
[illegible] altera poni, duabus vero [illegible]
[illegible] sic in sectione chordae [illegible]
[illegible] tertia, [illegible]
[illegible] posita et altera ponitur [illegible]
et tertia de harmonica; igitur duodecima
[illegible] quasvis excludatur [illegible]
duodecima [illegible] quod [illegible]
[illegible] erit et [illegible]
[illegible] 18°, 22½°, 45° [illegible]
[illegible]

[illegible] 30. 31. 42. — Patavii [illegible]

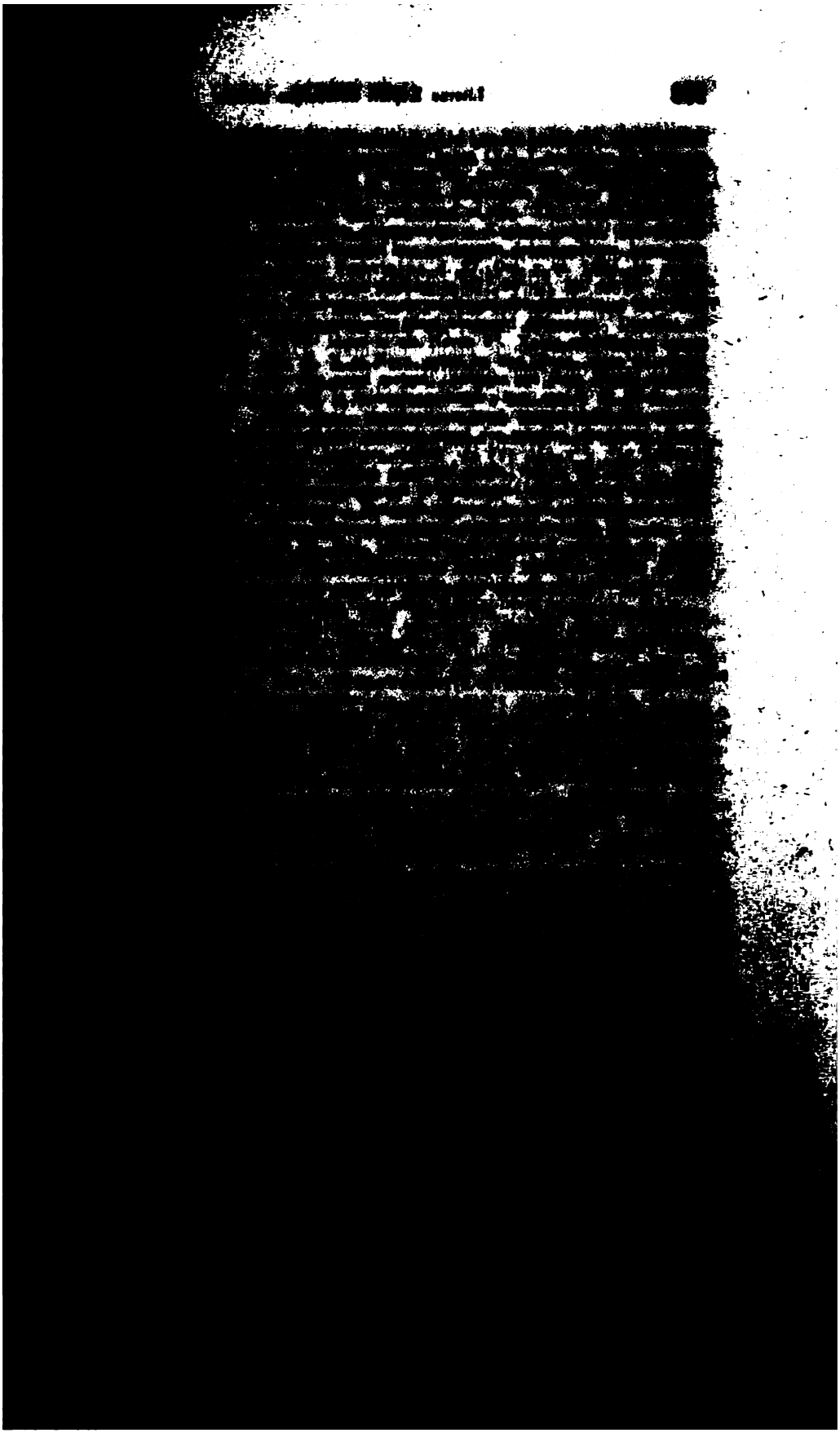
[illegible] Mente Rulianos [illegible]

[illegible] simplicissimosque mihi videntur [illegible] philosophari allegat philosophus: et respondeo, [illegible] tamen experientia, cum nemo ibi fuerit, [illegible] argumentor probabiliter a similitudine, et [illegible] multa habet similia terrestribus. Itaque et [illegible] quas ab exhalatione humori commiscentur [illegible] id utilitati cedit. Nec enim solus [illegible] Remee, sed etiam Brahaus meum in hac [illegible] Id ego tanto libentius accepi, quod [illegible] Tari affirmo cum Aristotele. Cum primum [illegible] motum cum Sole colligationem [illegible] rationis colligatio fieri non poterit Terra [illegible] nisi rationis quodque agit, non chronologice, sed [illegible] Sed sed ita [illegible] [illegible] eodem modo et Solem [illegible] stationem et similia. Sufficit igitur [illegible] dicere motus videlicet Telluris, [illegible] De cetero motus planetarum [illegible] plurimum, sed illae virtutes magnetica [illegible] et modo comprehendi [illegible] in Terra deprehendi. Quodsi quis [illegible] Gilbertus, cui [illegible] Tycchonis in nostra [illegible] [illegible] scriptum [illegible] in terra commotionem naturae, [illegible] in caelo sic fuit in alia [illegible]

[illegible]

Vol. I. [illegible] Ut ratio F et A ad [illegible] ita [illegible] G et D, deinde inter D et [illegible] [illegible] quæ ex latitudine tuæ [illegible] [illegible] inter ea discrepare, sed omnes [illegible] [illegible] proportio semper %. Nam distantia [illegible] majorem, bellicos qui duplicatim [illegible] [illegible] distantia 5 ad 4. Hæc ego [illegible] bono Tycone, nunc ad alia. [illegible] [illegible] plantas et creaturas viv[illegible] [illegible] Copernico Telluremque instar planetae [illegible] quod Terra in centro [illegible] [illegible]

azimuth a meridiano, orbem



fici cadit in [illegible] significatio, quod [illegible]

Octavo Lucas [illegible] 1880. Contra ea eo [illegible] S. Petri a Julio II. Pontifice [illegible] ponit [illegible] ver [illegible] anno 1508.

DE

[illegible] PEDE SERPENTAMII,

EXORTUM DE NOVO INTER

Cap. XXII. Materiam Novi sidereis [illegible]
XXIII. Cœli materiam esse [illegible] præsertim ab eclipsi [illegible]
XXIV. De efficiente Novi sidereis, ubi [illegible] naturali instruitur.
XXV. Comparatio hujus Novæ cum [illegible] an eandem habuerit.
XXVI. An fortuito congresserit [illegible] [illegible] materiibus.
XXVIII. Pars Altera, quæ [illegible] naturalibus, in [illegible]

[illegible] medicus Magnomaid in Ala[illegible]
idem Michael [illegible] Tubingae [illegible]
29. Sept. Julius [illegible] 8. Oct. [illegible]
quibusque in cuiusdo [illegible] superiorum [illegible]
justitia vero Jovis et Martis [illegible]
erat [illegible] magna, in [illegible]
[illegible] nonnulla Dominica [illegible]
[illegible]

[illegible] celeritate communis, per se quidem [illegible] compositionem accidentariam inde resultans [illegible] In cursore nobile velocitas, in Rege quies et [illegible] dices Pico, qui Solem docet stare, dum [illegible] Neque sana est ullo modo ratio illorum, qui Saturn[illegible] Jove faciunt velociorem. Nam vera astronomia [illegible] tardiorem facit, quanto est ejus spatium itineris [illegible]. Quae de verbo 50. Centiloquii Picus disserit, [illegible]randulanus ipse ex eo tantum deducat, quantum [illegible].**)

[illegible] Picus astrologia medias conjunctiones respiciendas, [illegible] apparentes enim fuisse considerandas. Fateor, nec [illegible] hanc artem, religionum et imperiorum periodos ex [illegible], ego quoque cum Pico ineptiarum et supersti[illegible] [illegible] nulla est astrologorum experientia de conjunctio[illegible] [illegible] si vera conjunctio differt a media? cum vera aliqua [illegible]? Nam etsi anno 1583. quae motu medio [illegible], [illegible] vero motu incidit in 21° ♓ et anno demum 1703 [illegible] in ♈ [illegible] conjunctio apparens eo anno [illegible], [illegible]. Itaque si quid factum in rebus humanis, [illegible] Ariete referebatur, falli quidem circa signum potuit [illegible] circa ipsam conjunctionem; de quibus hic agimus. [illegible] astrologorum inductiones usque ad specialia prae[illegible] [illegible], circa tempus magnarum conjunctionum [illegible] notatarum quorumque affectuum [illegible] [illegible] astrologi, [illegible] res ipsas, quae per [illegible] ab hoc eodem principio profecta.

ex situ Terrae ad binos planetas [illegible]
monstravit, ad illam veritatem, qua de [illegible]
in Terra sedeat, non in planetis ipsis, [illegible]
a se ipsa potius, propter impressionem [illegible]
particeps, animal, ad [illegible] rerum exter[illegible]
Picus ex Plotino inculcat, non posse radi[illegible]
[illegible], et nova virtus aut forma proveniat, [illegible]
bam et illud, videri rectius et propius [illegible]
promanent; tum autem semper misceri [illegible]
triangula vel sexangula: denique in ipso [illegible]
radiis coëuntibus ad punctum radiis [illegible]
diligenter perpendebam. Neque tamen [illegible]
clarissimam experientiam, quae testaba[illegible]
meteororum existere, cum planetae [illegible]
tunc quietem aëris potissimum, cum nulli[illegible]
tantum si corporibus, sed etiam si [illegible]
pinguarent, ista fieri, eaque subito [illegible]
proximis ante utroque effectus [illegible]
quadrato. Jofrancus Offusius (p. I. [illegible]
conjunctionem et oppositionem, quas [illegible]
retulisse. At fassus est imbecill[illegible]
[illegible] experientiae cedens [illegible]
radios, non ipsorum radios [illegible]

[illegible]

[illegible] formali, altera efficiente, quid prohibet existere [illegible] naturalis in corpore sublunari architectus, [illegible] utitur pro exemplari, eique conformem in suo cor[illegible] motum. Etsi Ptolemaei ratio insufficiens est. [illegible] esse subtensae arcuum circuli rationalium et irratio[illegible] vel longitudine aequentur certae parti diametri, cum [illegible] faciant.

[illegible] distinguendi inter bonos et malos aspectus ejusque vanitate [illegible] ab Abosaare dicta vere id est, quod Picus dicit: ex mille [illegible]. Nam oppositum a Lunae impletione, quadratum ab [illegible] a superiorum planetarum statione probat: nec tamen [illegible] articulos neque constans est, rei constantis et exquisitae [illegible]

[illegible] rationem a consonantiis musicis Picus perbenigne [illegible] prosequens: Sed haec utique bella sunt habentque spe[illegible] apud eos, qui philosophiam de limine salutarunt. Opto mihi [illegible] Haec enim, haec illa est ratio, quae per primam Materni [illegible] Ptolemaei (Card. Comm. in Ptol. I, 12.) exculta, in philo[illegible] deducta, non speciem veri exhibeat, sed plane satisfaciat [illegible] mirum in modum delectet. Nam ut Picus quidem [illegible] misere habet et recte a Pico exploditur. Primum [illegible] concentui commune cum radiis planetarum? Deinde, si [illegible] ratione consonare dicantur, qua ratione quaedam signa [illegible] quae ex alia futilitate confirmantur. Denique si signa [illegible] jam ratio tota jugulata est, nec congruet simili[illegible] patebit.

[illegible] connexionibus et de aspectibus verum est [illegible] facultatibus spiritalibus naturalissima [illegible] est, apud philosophorum principem, geometriae vestigia [illegible] geometria sit quidem quasi mundi archetypus; [illegible] mundum in temporis quodam exordio conditum [illegible] cum Platonicis aeternum faciat: deinde et hoc [illegible] animalibus, uti vis ipsa et augmentatio cor[illegible] sic etiam archi[illegible] Propterea [illegible]

stum, in quem respiciunt, indidisse mundo [illegible]
ipsae hae essentiae spirituales corpori movendo [illegible]
figuras geometricas, admirabili quodam modo et [illegible]
carere, distensionem in spatia. Dixeris illas [illegible]
matica, sed quae plagarum distinctionem in [illegible]
aliquania, puncta talia, qualis fiunt ex sectione [illegible]
unum concurrentium.

Propterea figuras oblatas extrinsecus intro [illegible]
cognatis, ut a luce et coelestibus lucentibus, [illegible]
coeunt, ut rudimentum repraesentetur figurae [illegible]
continuandam seu ad solidam figuram in [illegible]
suam illam creationis imaginem, h. e. corpus [illegible]
capto instaurant alacres, atque id, quod per [illegible]
mentis agunt sedulo et cum insigni excessu, [illegible]

Neque tamen sic amant promiscue [illegible]
sed in illis delectum habent hunc, ut [illegible]
rentia, vel hac ab illo continue subtracta, [illegible]
figurarum *σεμνοτοιουτων* notae. Ut ratio [illegible]
5 de 8 ablata relinquunt 3, quae a 5 [illegible]
relinquunt 1. Et 1, 2, 3, 5, 8 [illegible]
denominationes aut notae partis rationum [illegible]
Nam 1 significat totum, 2 [illegible]
peto oriuntur rationes, quinque [illegible]
libet in circulum transiste medium [illegible]
Quae rationes a natura rerum [illegible]
cum in sic formatis in [illegible]
voluta, sed rationes vere [illegible]
minus perspicere potest, [illegible]
[illegible]
testum [illegible]
[illegible]

[illegible] quod Deo permittente alibi probabo justo libro: huic [illegible] comparationi, si quintilem, biquintilem, sesquadrum [illegible] mathematice ad absolutissimam congruentiam nihil de[illegible] [illegible]

[illegible]ria hominis, id est senans auditus, communi sensu [illegible] probab in vocibus, quod geometria comprobat in quantitatibus, [illegible] ullum genus rerum excogitari pro causa consonan[illegible] quod omnibus particularibus considerationibus satisfaciat: quid [illegible] dabit? Nam vocum concordantia per se nihil operatur [illegible] in hominem alio quam sensitivo, nec ullum hilarem humo[illegible] [illegible] potest. Accedit vero anima sensitiva in homine, quae [illegible], sonos quidem introrsum recipit, proportionem vero [illegible] probam et geometricam sese exhilarat suumque corpus [illegible] Haec utique non ratiocinatione fiunt. Nisi forte Picus [illegible] hujus geometriae tribuet, quam post tot secula vix [illegible] Tribuat igitur et cervis; quia potius rustici facul[illegible] [illegible] si, citra discursum, affici dicat iisdem figuris seu [illegible] sectionibus et proportionibus in conformatione vocum, [illegible] in conformatione mundi selegit. Medium inter [illegible] et imperitissimus quisque inveniet facillime, nullum [illegible] omnes veri philosophi dicent? Itaque quam rationem [illegible] geometria in vocibus afficiat hominem? eandem ego dicam, [illegible] stellarum afficiat naturam sublunarem? [illegible] rationem confinxit aspectuum, quod artificium [illegible] quot sunt in tempore semimenstrui phases Luna, [illegible] [illegible] ingeniosam conjecturam habet: ut mirer [illegible] eam non sint secuti, sum rationes undique quae[illegible] [illegible] quidem verum est, astrologos hac occasione ad[illegible] [illegible] (quod alibi Picus astrologis invidens tribuit) [illegible] in certum agitari, sic hos errare in veritatem [illegible] [illegible] artium inventiones fortuitae sunt.

Non hoc dico, quod omnes, quibus eadem ve[illegible] [illegible] sed quod plurimae [illegible] [illegible] Hoc meo verum de tota [illegible] [illegible] et transitione. Quotiens enim [illegible] [illegible] hominis vel [illegible] [illegible] hominis natura, et [illegible]

Rationes quidem speciosae sunt; ad interiorem philosophiam tenebras tise, si de illa constet. Etenim si conjunctis, ipsa non sustinent hoc onus actionis i ratae: multo minus fingendum est, hanc vim in corpu vis, cum constabi divinaq, nadum c

Qu ceptioni loep con etiam de filiis, pr statuant in genea similes particele inter Fr Natus 1604, o perhibetu filii im gulas, c 1571 Sta primogen tandem c appellat

batur

Not tionem, latione

[illegible] haereat. Comparet medicus aliquis exemplum [illegible] res praeteritae sic custodiantur, ac si perpetuo essent [illegible] utique similitudo, magnum miraculum: diversitas [illegible] quae in memoria relucent, vel per quinque sensus [illegible] vel a ratiocinatione actuali ab intra phantasiae [illegible] rerum coelestium occulta aliqua percipiendi ratione [illegible] propterea, ut quae sunt in memoria, non naturam [illegible] commovent: sic hi characteres coelestium contra non [illegible] naturam incitant. Itaque quod est in memoria character [illegible] vel cogitatae, hoc est in facultate hac animae cha- [illegible] tempore nativitatis influxit: vicissim quod est in reminis- [illegible] illa ratiocinationis vel novae sensionis, quae nos ad [illegible] permovet, hoc est in hac occulta impressione novae [illegible] transitus per loca natalitia. Verum, ut in re [illegible] omni asseveratione contendam, paratus audire hos [illegible] philosophantium.

[illegible] implicitas ignes, quid magna conjunctio, dixi per astro- [illegible] physicam, quantum mihi videbatur, superest [illegible] hujus magnae conjunctionis.

Caput XI.

[illegible] *conjunctionis, quae praecipuum locum tenet* [illegible] *astrologia* [illegible] astronomia [illegible] Manil. Astron. II, 16. sq.) Verum, [illegible] meridiem [illegible] meridiem 14/24. Doc. Brahe- [illegible] vivo [illegible] volvantur [illegible] quibus petenda

non additis vel instrumentorum vel calculi [illegible] res sit adeo facilis, omnes in observando [illegible] postquam astronomi nomen invaseris, [illegible] toritatem stabilire.

Cum Sol anno 1603. die 17/27. Nov. ad Jo[illegible] Saturnum appulerit, factum est, ut per antecedentes [illegible] sub Solis radiis laterent absconditi. Primum [illegible] longas bidui pluvias vidi die 6/16. Dec. mane [illegible] Saturni tenuius lumen oppressit, ut is videri [illegible] supra Jovem, declinans a verticali Jovis [illegible] Jovis a Mercurio ad ocularem aestimationem [illegible] ventus decumanus coortus, qui duravit duos [illegible] petu; simul et ninxit largiter: secuta nebula [illegible] usque in diem 14/24. Dec.: et diebus [illegible] diebus 7/17., 8/18., 9/19. Dec. passim [illegible] commotum oceanum, damna plurima et pe[illegible] attulisse. Tandem 15/25. Dec. in [illegible] tutina affulgente facta mihi copia [illegible] epistola sequenti, quam eodem die [illegible] igitur epistola.

Scio Te hujus diei solemnibus interpellat[illegible] agnoscit ferias. Per hos dies, ita ut [illegible] junctionis magnae conspectum. Scrip[illegible] quam putaretur. Ciarum vero mane [illegible]

Accidit igitur pulchro quodam [illegible] natalitius illuxit, tres planetae Saturnus [illegible] disposita in diametro [illegible] derunt, ita hoc apparitio procul [illegible] fuit. Nam et alias [illegible]

[illegible] 58 in 6′ proveniant ad minimum 10 dies neque amplius. [illegible] Nota est non 24. Decembris, non 18. 17. vel 16. sed ante. [illegible] Hactenus epistola.[15]) (Vide censuram.)

[illegible] eodem die perscripsi; quae etsi non exquisitissima, fidei [illegible] placuit. Jam quid in subitanea et tumultuaria observ[illegible] ingrentem diem trepidi praevertimus), peccatum sit, accipe, [illegible] dierum diligentia.

Censura hujus observationis.

[illegible] expediti essemus ob frigus et aurorae claritatem, tempus [illegible] est. Et quia prior Jupiter fuit observatus adhuc humilis, [illegible] Jove altior; is interim una cum Jove nonnihil ascendit, [illegible] hanc distantia 1° 32′ esset justo amplior aliquot scrupulis. [illegible] Sabio sequente 18/28. Dec. mane, in azimutho 47° 15′ [illegible] hae altitudines, et priorem

[illegible] 6° 54′ } Differentia 1° 26′ minor justo, quia prior ob-
[illegible] 5. 34. } servatus.

[illegible] 7. 12. } Differentia 1° 24′ vicior et tamen paulo minor
[illegible] 5. 48. } justo, quia non possunt omnia eodem momento perfici.

[illegible] assumere possumus differentiam altitudinum 1° 25′ [illegible] aliqui azimutho versante, quasi quarta parte altitudinis, [illegible] inferiorem plus attollebat quam Saturnum superiorem, [illegible] est in tabula Tychonis. Ergo correcta differentia [illegible] distantiam diei 25. Dec. Nam motus triduii in Jove est [illegible] 1′ 4″, in circulo ad ecliptiam proximo [illegible] circuli fuisset angulum 50′ 1″, proxima complementum [illegible] distantia in superationem 17′ 1″, erant partem 11′ 14″ [illegible] altitudini, congruentem superationi altitudinis. Diffe- [illegible] 26″. Hinc instantem differentiam subtraho 14′ 14″; [illegible] per die 25. 4′ 45′ 18″, quam vicibus aliquo- [illegible] 36″. [illegible] distantia datur in longum et latum, dat variorum [illegible] 1′ 1″ [illegible] 47′ 48″ [illegible]

amplius. Latitudinum differentia fuit 1° [illegible]
mihi 58 4/5′, discrepantia 6 2/5′ facillime [illegible]
cum Jove non praecise in eodem verti [illegible]
planetarum observantur dedita opera, res non [illegible]
Itaque lector hac propinquitate debet esse con[illegible]
solum conjunctionis magnae inquisivimus.

Age nunc alias circumstantias consideremus, [illegible]
veris locis planetarum in longum et latum, [illegible]
ex 15/25. Dec. Cum enim instrumenti mei [illegible]
pinquitatem 1° 59′ (arctius autem illa cogno[illegible]
tiam ♃ et ♅ minorem esse. Minus itaque [illegible]
linea, quae erat horizonti parallelos fere: ut [illegible]
Triangulum erat scalenon, cujus minimum [illegible]
mediocris ad ♄ latera in proportione [illegible]
10, 13, 15. Haec primo invicem [illegible]
missis, distantiam ♄ et ♃ fuisse 11° 45′ [illegible]
larum ista distantia habet 10′, talium [illegible]
Si ergo 10 sunt 1° 15′ 20″ vel 75″ [illegible]
minus est quam 1° 50′, ut par erat.

Et cum prius sit inventus [illegible]
que parallelo 50° 58′, erit ejusdem parallelo [illegible]
pinquis parallelis angulus 39° 14′ [illegible]
attollebatur paulo altius quam ♃ [illegible]
sentem angulo 10′. Igitur [illegible]
49° 14′: qui quaesitus in [illegible]
49° (quod est dimidium [illegible]
[illegible]

absorpserunt [illegible]
fuit [illegible]
1° 14′ [illegible]

[illegible] (quae supra inculcatis respondeam) initio Decembris ad Solem, [illegible] venit, et statim die 25. Nov. vel 5. Dec. secundo ad [illegible] Nov. vel 7. Dec. secundo ad Jovem venit; quia paucis die[illegible] est 5 vel 6° a Jove distare; cum tabulae vix 3 indicent, [illegible] Ad 3/13. Dec. iterum converso cursu, die 6/16. 7/17. Dec. [illegible] horribilis ille ventus, in sextilem Martis impegit; et sic [illegible] Dec. tertio ad Saturnum, 13/23. Dec. tertio ad Jovem per[illegible] crebrissimos aliorum etiam planetarum congressus et configu[illegible]

[illegible] tionem loci Mercurii cepimus die 18/28. Dec. distantiam [illegible] 55° 53′ correctam per observationem aliarum distantiarum [illegible] Et cum haec distantia sit ad eclipticam transversa, quia [illegible] Mercurius in septentrione: respondebit si de longitudine [illegible] quae addita ad locum Spicae in 18° 19′ ♎, procreat longi[illegible] 14° 6′ ♐ et paulo ultra, quia Mercurius refractione attol[illegible] Spicam. Jam 15/25. Dec. ante locum Jovis sume 9° 45′ ♐ [illegible] corde distantiam Mercurii illo die inventam 1° 4′: ut sit [illegible] 10° 49′ ♐. Itaque motus triduii est 3° 17′: nec multo [illegible]

[illegible] 15/25. Dec. Jovis a ♏ corde distantiam invenimus 7° 25′: [illegible] dubitatione, quia perverso pinnacidio, ut habet annotatio, [illegible] altitudo fuit, nullum est a refractione periculum. Jam [illegible] aliquid cognitum, nihil extruemus. Assumatur ex [illegible] latitudo Jovis sept. 36′. Nam ea parum mutatur a die [illegible] quae cordis ♏ latitudo sit 4° 27′ aust., et longitudo [illegible] cum aggregatum latitudinum sit 5° 3′, differentia [illegible] circiter 5° 2′/′. Jupiter igitur in 9° 44′ ♐, differentia [illegible] non major, quod in perverso pinnacidio mirum tanta [illegible] Sed hinc quoque confirmetur calculus loci Jovis ad diei [illegible] subductus.

[illegible] ex Jove haberi, quae supra probatum, fuisse Sa[illegible] Magna quam proxime in [illegible] distantia [illegible] quantitatem [illegible] mobilis [illegible] et 21, [illegible] et [illegible] Quia vero ex Ptolemaei [illegible] [illegible] et hujus planetae other[illegible] [illegible] in ♎ [illegible] Martis [illegible]

planetarum advigilavi. Sed cum Sol ingrediens [illegible] sequenti signo Scorpionis brevium sint [illegible] interesse temporis inter exstinctum crepusculum et [illegible]

Itaque pro latitudinibus planetarum Jovis quidem [illegible] Ophiuchi dimensus sum 35° 38′; Saturni ab eodem [illegible] 35° 9′, qualiem inter Lyram et Aquilam erant [illegible] ribus, quam sunt Tychonica, utor instrumentis [illegible] batione subinde indigent); at nec Martis stellam [illegible] ad stellas in zodiaco pro longitudine comparare potui [illegible] planetae. Et secutae diebus sequentibus [illegible] et magno frigore, eo quod ♀ et ☿ in [illegible] que in utrorumque sextilibus; nec multum [illegible] sopherum mihi ob nova dogmata, quibus [illegible] infensus, cum rogo, vel unius anni [illegible] pestatibus comparare: aut persuasus, [illegible] solum annum, uti est a me exceptus, de [illegible] scio si est discendi cupidus, si [illegible]

Die 16/26. Sept. coelum ursit, [illegible] in frigido; soletque frequenter fieri, cum Mars [illegible]

Ergo die sequenti 17/27. Sept. [illegible] observandos planetas: pulchrum spectaculum [illegible] corniculata eodem loco, ♄, ♃, ☽ in [illegible] scalene; brevissima distantia ♂ et ♄, [illegible] et ♄, denique ♃ et ☽. Primus occidit ♂ [illegible] ritque ad oculum; jam tam [illegible] consignatione, die 17/27. Sept. [illegible] vero quam occiderent sextantes [illegible] ♂ ab Aquila [illegible] tem, quantum distabant ♄ et [illegible]

Tum ♂ a clara lucerna [illegible]

♃ a clara [illegible]

♄ a [illegible]

♃ a clara quadrilatera [illegible]

Inter Aquilam et [illegible]

[illegible] propinquum. Hinc jam corrigemus locum ♄ sic: [illegible] 3° 31′ aust., adde ♄ septent. conflabitur summa 5° 16′. [illegible] distantiae 27° 21′ divisus, constituit secantem 26° 54′. [illegible] abiata de 6° 54½′ ♑ relinquunt 10° 1′ ♐ veriorem locum ♄. [illegible] paucioribus brevibus et facilibus assecutus sum, quod apud [illegible] etsi scio non universalem esse modum hunc: at certe [illegible] ubi altera stella longitudine, altera latitudine parum differt, [illegible] verum praecognoscitur. Potes probare sic, si vis:

[illegible] ♄ 10° 1′ ♐. Capitis Ophiuchi 16° 53½′ ♐. Differentia 6° 52½′, [illegible] Distantia ab Ophiucho 34° 59′, secans 122053.

[illegible] verior latitudinis differentia 34° 23′. Itaque latitudo verior [illegible] Et summa latitudinum 5° 5′: cujus secans solis 13 particulis [illegible] Itaque secans de 26° 54′, auctus 13 particulis, 1′ solum [illegible] exhibet. Ut verissimus locus sit 10° 0′ ♐.

[illegible] dixi, quia rarissime (modo eligantur idoneae fixae) [illegible] venitur: nec ea tamen ullam habet difficultatem. Notan- [illegible] ♄ latitudinem veram esse minorem, quam hic apparuit, ob [illegible] in longitudine nihil aut perexiguum turbant refractiones; quia Saturno fuit in eadem pene altitudine.

Pro loco Jovis.

[illegible] ♐ in 6° 54½′ ♑. Distantia Jovis ab ea 19° 44′. Ergo [illegible] 17° 16½′ ♐. Sed caput Ophiuchi in 16° 53½′. Differentia [illegible]

[illegible] divisore adhibitus nihil mutat distantiam a capite Ophiuchi [illegible] ergo subtrahe a latitudine Ophiuchi 35° 57′, relinquuntur [illegible] Jovis septentrionali. Et haec ad 3° 31′ addita con- [illegible] 100224: cum hoc divide sec. de 19° 44′, 106239, [illegible] quae auferes a 6° 54′ ♑ restat 17° 32′ ♐, verus locus [illegible] refractio turbat, quod parum est: at aliquid sane [illegible] in latitudine erit [illegible] variationes sic, mediocriter consentiunt cum illis ante [illegible] quae dici distantia inter Lyram et Aquilam arguit, ex- [illegible] Itaque cum paulo ante observaretur inter Saturnum [illegible] abundavit colidem, cum vero pulsus 35° 5½′ recte [illegible] medio tempore [illegible] et volet, loco motum [illegible] Jovem et caput Ophiuchi vere 35° 58′, quae ablata [illegible] relinquunt latitudinem Jovis 19′, quia longitudo eadem. [illegible] longitudine a capite Ophiuchi [illegible] 35° 5½′ [illegible] latitudinum 34° 25′) [illegible] die 1722. Sent.

duas observationes stabiliri lat. 1°. 29′ [illegible]
non mansit et eadem altitudo in utraque [illegible]
ratio quin tales duas stellas, utramque ex eadem [illegible]
velle locum Martis in longum et latum definire. [illegible]
vare potui planetam propinquum occasui heliaco [illegible]
gissima operatione, qua Tycho Brahe in Progymnasmatis [illegible]
ut quae frustra subtilitatem quaesitura fuit, in [illegible]
sentit tamen calculo quantum satis est: [illegible]
10°. 38′ et diurnus 42′: horis igitur 8. [illegible]
horam nostram 19° 52′ ♐. Quod vero [illegible]
tanto altior et propior ecliptica quam in calculo [illegible]
quia Mars prope horizontem observabatur. [illegible]

Ex his itaque observationibus potest [illegible]
Saturni et Martis. Nam si Saturnus hoc [illegible]
19° 1′ ♐, et Mars in 10° 38′ ♐, die [illegible]
vesperi post hor. 8. fuerunt invicem [illegible]
proxime locum congressus Saturni et Jovis, [illegible]
aequalibus fere spatiis ab ecliptica distantes [illegible]
mutuo gradibus paulo plus tribus; Saturnus [illegible]

Postremo verus dies conjunctionis Jovis [illegible]
vitur magna conjunctio, sic habetur ex his [illegible]
locum in nimbo non intempesta tenebat [illegible]
coelum per nubium hiatus adspici, praesertim [illegible]
facile potuit. [illegible]

Die 29. Sept. vel 9. Oct. in meridie [illegible]
observationis prius habitae et diurnis [illegible]
stitit (quem jam modo vidisti [illegible]
Martis in 19° 14′ ♐ cum [illegible]
poste fuit, ut ita dicam, stationarius, [illegible]
ante meridiem fuerat plena [illegible]
tentrionalior quam fuit Mars, [illegible]
aequigradus ut ipse, primo [illegible]
Secundum eodem igitur [illegible]
Mars [illegible]
Saturnus [illegible]
[illegible]

[illegible] egentium, illegitimi luxu effeminatam, et libertate dissolutam [illegible] contabuerit, omnibus et artibus et prodigiosa Ibericum [illegible] [illegible]

Qualis ubi ad terras, abrupto sidere, nimbus
[illegible] per medium: miseris heu praesagia longe
Horrescunt corda agricolis, dabit ille ruinas
Arboribus stragemque satis, ruet omnia late.
Quotvehant bonitamque ferunt ad littora venti.
Et jam aggeribus ruptis spumeus amnis
Exiit oppositasque evicit gurgite moles;
Fertur in arva furens cumulo campoque per omnes
Cum stabulis armenta trahit.

[illegible] haec superis curae sunto. Nunc jam tempus est videre, qualem [illegible] Max. ipse clavum fixerit ad locum et diem hujus ultimae conjunctionis, et quasi monumento illam ad posteritatis memoriam commendare, ab principium hujus libelli dici coeptum, nunc quoad astrologiae exercietur.

Caput XII.

Observationes hujus Noctis Stellae.

[illegible] est et superioribus adjungendum, omnibus locis, ex quibus novi sideris pervenit, coelum per hanc Jovis et Martis conjunctionem sidaria exortum fuisse plurium continentibus aliquot [illegible] Octoberis serenitate restituta, hanc observavi sextante [illegible] diebus abundare deprehensus fuit aliquot minutis. [illegible] clara adhuc die, vidimus satis altae, antequam vel [illegible] stella cerni posset.

Martem	[illegible]
Saturnum	6. 12. vel [illegible]

Tunc sextante mensi sumus inter [illegible]
Aquarii 35° 12′, debuit esse 35° 9′. Sic [illegible]
Aquarii et inferiorem in cornu Capricorni 19° 42′; [illegible]
sextans circiter 4′ abundat ob luxationem pinnaci[illegible]

Die 11/21. Octobris in viridario Ca[illegible]
instrumenta Braheana, observavit Tengnagius [illegible]
me praesente, ista:

Inter Novam et	Jovem [illegible]
	Caput Ophiuchi [illegible]
	Humerum Sagittarii [illegible]
	Sinistr. genu Serpentarii [illegible]
Inter Martem et	Humerum Sagittarii [illegible]
	Sinistr. genu Serpentarii [illegible]

Pro sextante explorando mensi sumus inter [illegible]
pentarii 33° 30½′.

Eodem vespere observavit et Justus [illegible]
inter Novam et caput Ophiuchi 34° 0′, minus [illegible]
genu Ophiuchi et Novam 7° 47′. Inter Aquil[illegible]
bationis causa inter Aquilam et Serpentarii [illegible]

Die 17/27. Octobris ibidem observarimus:

Inter Novam et	Jovem . . . . .
	Caput Ophiuchi . . . .

Postea occidit stella heliaca [illegible]

Anno MDCV.

Postquam orta esset stella [illegible]
esset relicta, coepi die 23. Jan. vel 2. [illegible]
exercere; quae tamen hoc [illegible]
de parte incertiora, ne eherem [illegible]

Die 2/12. Februarii mane, [illegible]
ab Aquila ver[illegible] coepi [illegible]
A [illegible]

Ab Aquila	45. 54. [illegible]
	45. 45. [illegible]
	45. 44. [illegible]
	45. 45. [illegible]

Et [illegible]
[illegible]
21° [illegible]
[illegible]

[illegible] et cupiditati praedictorum, ubi haec duo [illegible] et quodam quasi enthusiasmo praeter rationem [illegible] diligenti doctorum virorum turba communis habet. Quo [illegible] metetur. Quid tingeris delicatulo philosophe, [illegible] sed pauperem stultae filia, qualis tibi videtur, [illegible] locum debitum illa apud hominem costae longe [illegible] non invenit, nisi per hujus simplicitatis intercessionem? [illegible] alias prius ita credulus fuisset, ut sese ex coelo futura [illegible] tam ita sapiens factus esset, ut astronomiam [illegible] discendam esse censeret. Si nisi per sapientiam [illegible] addicimur, nunquam ad eam addiceremur. Et in omni [illegible] et in omni cupiditate, dum rudis est, vanitatis plurimum [illegible] quae ad philosophiam itur, obvios ad pulchrum locum [illegible] hisce in praesens et in eum locum transmisisti, jam [illegible] observationes ex libello suo Germanico Hamburgi impresso [illegible] excerpemus. Sic ille:

[illegible] stellae distat	[illegible]	Brüggerus in Astron. de	
[illegible]	348 [illegible]	[illegible] Jaimann 1668	
[illegible] Oph.	16. 46		π 16°. 50'. correctus 16°. 45'.
[illegible]	45. 46.		
[illegible] pedes Scorpii	14. 50½		— 14°. 46' Iterato
[illegible]	32. 14.		14°. 45'. Denique,
[illegible] in manu Scorp.	19. 59.		
[illegible] Cauda	32. 2.		

III. Eodem die, ex Saturno, qui Novam antecedebat, [illegible] tudo die 17/27. Sept. minor quam 1°. 34'. Post dies [illegible] nomine. Assumam eam nostra [illegible] Novae: residui 30' aetatis adhuc accuri dimensio [illegible] quae [illegible] Saturnus in 17° 30' [illegible] Novae in 17° [illegible]

Caput XIII.

citer 54½', cujus secans 100012½, et [illegible]
Optimbi 34° 2' est 120669. Et hoc [illegible]
minuta particulis 24, cum prieri secanti [illegible]
diametri longitudinem. Itaque differentia latitudi[illegible]
minor est, quam inventa distantia. Cum [illegible]
latitud. 25° 57' aufero differentiam 34° 2' [illegible]
1° 55', ex 21 Oct. vel 1° 56', ex 23 Oct. vel [illegible]

Hac Novae latitudo est certissima [illegible]
utemur et certa in loco ejus secundum longitudinem [illegible]

Prima omnium distantia a Jove fuit [illegible]
sed in clarissimo crepusculo, quando Jupiter [illegible]
dierum in 20° 35' fuit, cum latitudine [illegible]
paulo minori, circiter 13', decessit [illegible]
latitudinem Jovis 13' a latitudine Novae [illegible]
100045, dividendo secantem de 34° 24 ½' [illegible]
cujus arcus 2° 56½' ablatus [illegible]
locum Novae ex Jove 17° 38½' ♈. Quod [illegible]
in ipsa metienda distantia per 2 aberrantes [illegible]

II. Eodem die Novae a Marte [illegible]
post dies quatuor fuit 28° 15½' [illegible]
serius. Motus centrifugi et unius horae [illegible]
hora Mars in 25° 17½' ♈ cum [illegible]
die 17. erat altior et liberior a [illegible]
latitudo calculo indice 1° 36'. Ad[illegible]
latitudines summas 3° 31' secans [illegible]
101097½, prodit secans 100907, [illegible]
relinquit locum Novae 17° 36½' [illegible]

III. Eodem die ex Saturno [illegible]
tudo die 17/27. Sept. minor quam [illegible]
nomine. Assumam [illegible]
Novae meridiei 30' [illegible]
quae dicitur [illegible]
Saturnus in 11° [illegible]
[illegible]

[illegible] in [illegible] stellarum teneri [illegible] [illegible] [illegible] aliquam.

[illegible] sequentes correctas distantias sextantis. Iam praecedentia, [illegible] filam in sequentia, sequentes in praecedentia. [illegible] distantiae sextantis, quod [illegible] die 14/24 Oct. [illegible] instrumentum exhibet distantiam 19° 54′; quibus hisce [illegible] horum est 17° 41′ ♐. Adde quod, quae [illegible] [illegible] posset, [illegible] ecclipsi et refractione [illegible] [illegible] 48′ ♐ apparet.

III. Die 5/16. Octobris.

[illegible] 5 distantiae, ut patet ex distantia [illegible] Capricorni, Aquarii. [illegible] 18° 0′ [illegible] [illegible] [illegible] Aucta [illegible] distantia per 11½′, [illegible] Jovis, [illegible] refertur in [illegible] [illegible] Sagittarii, primo in 17° 41′ ♐, iterum in 17° 39½′, [illegible] Opiuchi; [illegible] vera distantia 7° 23′ vel [illegible] 23′ vel 17° 39′ ♐.

IV. [illegible] 11/21. Octobris et sextante Braheano.

[illegible] Assumatur locus Jovis ex analogia [illegible] [illegible] hac usque [illegible] sit usque ad 9′ sept., [illegible] novae, residui secans 100048 dividat secantem [illegible] 100247; prodit secans 100199 arcus 3° 36½′, qui [illegible] relinquit 17° 45½′ ♐ locum sideris.

[illegible] Sagittarii, a quo distabat Nova 19° 54′, refertur ut

[illegible] prop.	Distantia	Prodit. 100048	
[illegible] ber.	8988 [illegible] 52	Diff. long. 13° 57′ 36″	
[illegible] 56′ ber.	Sec. 104495	Log. Axae 3° [illegible]	
[illegible]	101410.	Long. [illegible]	
[illegible]		Diff. long. 13° [illegible]	
[illegible]	Pridie Octobris.		
[illegible]		Prodit. 100[illegible]	

Sin à centro Scorpii [illegible] Distantia [illegible]
Latitudo fixae 4° 27′ aust. 14° 5′
Novae 1° 56′ Sec. 10347
Summa 6° 23′ Sec. 10064
Ergo maxima latitudo [illegible]
Differentia 12° 27′ 15″ Locus [illegible]
locus Novae 47° 48′ 35″ [illegible]
Differt igitur locus [illegible] 2′ [illegible]
fuisse patet ex Fabriciana, quae hanc [illegible]

Nunc locum stellae computabimus. [illegible]
Primum, quia ratio Byrgii [illegible]
34° 0′, igitur latitudo stellae est illi 1° 5[illegible]
II. Quia [illegible] genu Ophiuchi minor [illegible]
in Tychonio Instrumento [illegible]
gure 17° 41′ [illegible] 17° 36′.
III. Quia distantia ab Aquila [illegible]
proditur locus 17° 39′ ♐.

IV. Distantia ab Antenna minor [illegible]
stellae novae 17° 41′ ♐.

Locus [illegible]

[illegible] in consequentia minuit promovet (quae provenit debito [illegible] distantiam hanc, in Latino exemplari positam, in [illegible] quod ab ascensione ejus recta et declinatione, quae [illegible], discrepet longitudo et latitudo apud Tychonem [illegible]. Ponit enim Tycho Brahe anno 1600. ascensionem [illegible] Obliquam 251° 56', declinationem 15° 7' austr. Hale [illegible] 30 ½ ♐, latit. 7° 17⅔' bor. Brahetus ponit 12° 24' ♐, [illegible] 1600. Sic igitur Fabricio Nova per genu dextrum [illegible] mihi observatione priori in 17° 45½', vel 17° 41½', [illegible] in 17° 34½', vel 17° 35½' ♐, quam dixi incom- [illegible] factam.

[illegible] longitudine et latitudine Novae Stellae quoad [illegible] ejusdem ascensionem rectam et declinationem con- [illegible] igitur longitudine in 17° 40' ♐, latitudine 1° 56' sept.; [illegible] recta 236° 47', declinatio 21° 1½' austr. [illegible] cum 17° 51' ♐, oriebatur Pragae cum 15½' ♐, [illegible] a principio fere cum Jove. Et cum Pragae alti- [illegible] aequatoris 39° 54': hinc ablata meridionalis declinatio [illegible] stellae meridianam 18° 52½', quam inveni 18° 49' vel [illegible] Tubingae, cujus examen per hiatum gene factum, [illegible] extendere per 30° 14' (declinat enim per [illegible] vel 30° 10', ad summum 30° 12', prout accuratius [illegible] perpendiculum, in quo residuum haesit vitium [illegible] sic ages.

[illegible] Novae 18° 49' ab altitudine sinistri genu 36° 9', [illegible] declinabat 3° 40' in austrum; addis ergo 3° 40' [illegible] 21° 1' pro declinatione Novae, ut etiam ex cal- [illegible]

[illegible] refractione, quae in altitudine 19° non omnes [illegible] declinationem sunt. [illegible] enim refractionem, quam vicinior horizonti habuit, [illegible]

tione vicinarum stellarum: ex nominibus [illegible]
fabulas novas poeticas aut veteres [illegible]
cepisse ad suscepta nomina. In Serpentario [illegible]
sideri maxime cum oriri incipit, serenis et [illegible]
apparet linea stellarum insignium 19, quae [illegible]
mesnam Ariadnes quasi circa centrum [illegible]
Quinque circumducta stellis quinque postea [illegible]
binis stellis in eadem quasi linea disposita [illegible]
prima in tabula mea deest, brevitate [illegible]
meo in humerum, secunda in ulnam, [illegible]
quae minor ceteris ipsa tamen dispositione [illegible]
fit; quarta demum vindicatur temporibus [illegible]
sexta in sedem Serpentis est, septima et [illegible]
nona et decima Serpentis) sunt in Serpentario [illegible]
et accensentur manui sinistrae Serpentarii: [illegible]
genuibus sinistro et dextro Serpentarii [illegible]
solitus sum ego decimo tertio loco numerare [illegible]
createra cernit in ejus aspectum [illegible]
[illegible]

Hae figuras et per se evidenti [illegible]
nente exit, existimo adjunctis [illegible]
aliam. Cui encyclopedia [illegible]
mista. In summo trium stellarum [illegible]
honoris; sub qua a dextris et sinistris [illegible]
speciem humerorum et [illegible]
[illegible]

Eliorum [illegible]

[illegible]
tuae magnitudo [illegible]
tudad immortad [illegible]

Accinsit tabo [illegible]

[illegible] aliquos corruperunt, ut [illegible]
[illegible] labias; dispositionem rictus qui in [illegible]
[illegible] neque globos Tychonicos expressit, [illegible]
[illegible] Ptolemaei extra perversa sua quinque stellas in [illegible]
[illegible] plagae, nam pro borea substituendus auster. Erra-
[illegible] quoque Arabiam transit. Itaque reduxit eum [illegible]
[illegible] in ocularissimus hominis diligentia mireris. Agnovit
[illegible] in globo et stellas has in austrum transtulit: unde Weid-
[illegible]
[illegible] dextram anguiferi plantam secat orbita Solis. [55])

[illegible] globi, qui Tychonis Brahei auctoritatem praeferunt, multa [illegible] inventis; dum imitatores mechanici has stellas, quas [illegible] humilitatem vel ob alia impedimenta tradiverat, de suo [illegible] vero pictorum arbitrio relinquunt; inde factum, ut hae [illegible] in globis Tychonicis et in Bayeri tabula perversissime [illegible] sinistrorsum [illegible] dextro signentur, quas auctores in planta pedis esse [illegible] pedis manifesto admonuit.

[illegible] Bayeri pictor (aliquam dolente auctore) decuria sini-
[illegible] confusio in Ptolemaicae descriptionis usu could com-
[illegible] Brenggero non injuria reprehensus est. Fuit enim
[illegible] contentio, qui cum vario nomine vix tandem
[illegible] propinquitatem ad hanc istitudinem haereseos,
[illegible] dextrum situm et perversis vocitis. Quam enim
[illegible] desperavit, de hic quarta est Sententia 95 fuit.
[illegible] tacitione numerorum quorum prosequor, id ab-
[illegible] coepi dictorum originem pellicet hujus idoli coelestis
[illegible] quae in coelum recepta jam coepisse poenas
[illegible] Anaeplinum hunc esse fingit, qui in [illegible]
[illegible] Hippolyto poenas Jovi non exitiosiores [illegible]
[illegible] Nimirum iqui [illegible] in [illegible]
[illegible]

Boeotii interfectores, vel Jasonem, qui Colchidem Aeaeam, Egenes nymphas necem in [illegible] dicit Eurydicen. Ad quid et Lesbium illum [illegible] conversum, illum qui caput Orphei [illegible] ad Coronam, et quas hanc non longe interv[illegible] etiamnum in Corona caput Orphei, qui lyra [illegible] tur? Sin hoc minus placet, Aristaeum in Serpentem, et lucae causa patent [illegible]

At nihil accommodatius Laocoonte Virgiliano filiorum avertentem

Corripiunt spirisque ligant ingentibus [illegible]
Bis medium amplexi, bis collo squamea circumdat tergum, dat superant capitibus [illegible]
Ille simul manibus tendit divellere nodos [illegible]

Frustra quidem omnia. Nulla [illegible] versu:

Semper erit parilis [illegible]

Omnes vero hactenus contemplatus [illegible] Nunc a indicia ad caelestes [illegible] monstravit Ptolemaeus [illegible] Hipparchus [illegible] in Serpentem [illegible] [illegible] menses sub [illegible] [illegible] 29 et 30 horarum [illegible] hosce in Brabeo, quantum poti [illegible] quam tenuis. Nam et [illegible] [illegible] vicinae et [illegible] [illegible] [illegible] [illegible]

[illegible] evadit in alterum hemisphaerium non projectile, hic [illegible] a puncto contactus quadrante: talis semicirculus projectus [illegible] potest) fit hyperbole, ut in hac nostra tabula omnes circuli [illegible] paralleli, designantes latitudinem, sunt hyperbolae. Deni[illegible] nulla pars circumferentiae quadrante integro distat a [illegible]: circulus talis projectus in planum fit ellipsis; aut si polus [illegible] contactus, plane circulus. Demonstratio in promtu est, cum [illegible] aliquo minorum circulorum undique connexum creat super[illegible] quam secat planum sphaeram tangens.

[illegible] distorquentur schemata, praecipue in extremitatibus tabulae, [illegible], ut hic apud caput Serpentis, ubi necesse est rectum angu[illegible] latitudinis a parallelo latitudinis in sphaera secatur) hic [illegible] in obtusum: interim tamen manent eaedem rectae, quarum [illegible] est facilior utpote simplicium, ideoque et utilior.

[illegible] itaque seriem culminantium cum altitudinibus.

[illegible]	Altitudines per quadrantem aequinoctialem.
[illegible]	11° 51′
[illegible]	14. 54.
[illegible]	10. 21.
[illegible]	24. 15.
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	22. 24.
[illegible]	14. 27.
[illegible]	24. 16.
[illegible]	19. 16.
[illegible]	12. [illegible]
[illegible]	30. [illegible]
[illegible]	42. 39.
[illegible]	8. 25.
[illegible]	2. 54.
[illegible]	24. 48.
[illegible]	13. 40.
[illegible]	15. 28.

	Altitudines per quadrantem aequinoctialem.
Eadem fere culminatio tibiae	19° 17′
Eadem fere primae in isoscele	
[illegible] spirae Serpentis	27. 30.
Volae pedis dextri Ophiuchi	15. 49.
Aculei ♏	2. [illegible]
Stellae Novae	18. 50.
Tali fere eadem culminatio	15. 52.
In basi isoscelis spirae Serpentis prior	24. 49.
Ptolemaeo in capo cubiti dextri, mihi 4. Serpentis a fine.	
In basi isoscelis spirae Serpentis posterior	[illegible]
Chelae in dextera [illegible]	30. 18.
Cuspidis sagittae culminatio fere eadem	9. 20.
In anteriori dextro pede equino Sagittarii	[illegible]

[illegible] calculi labore [illegible] incidebant aut [illegible] propria [illegible] ex [illegible]

latit. 4° 54′ bor. [illegible]
in signo Scorpionis [illegible]
quod expressum fuerit a duplicibus [illegible]
Die vero 18. Martii, quo Mars [illegible]
distantia Terrae supra eorum [illegible]
media oraris. Sequenti 17. Martii, quando in [illegible]
0° 58′ bor., jam superaverat Tineam ex corde Scorpii.
Cum ergo sit cor Scorpii in 4° 17′ ♏, [illegible]
parum admodum: scil. anno 1664. in 4° [illegible]
circiter 32′ inferior Marte: latitudo igitur [illegible]
Et quia die 17. Martii Mars cum [illegible]
in 1° 42′, processit igitur per 2° 29′ [illegible]
per 1° 32′ via transversa. Et quia [illegible]
est in 29° 8′ ♏; hinc ad 1° 42′ [illegible]
tiae 2° 32′ esse quam proxime [illegible]
tur hinc inter oruris sinistri esse ulterior [illegible]
48′ cum [illegible] 1° 28′ sept. Hinc vero [illegible]
etiam locum mediae oruris additi quod [illegible]
sinistram parumper incidentis etc. [illegible]
14° Mars motu retrogrado jam [illegible]
calculus reponit eum in 3° 38′ [illegible]
Erit Martis, cordis et cor praecedentis [illegible]
minimum latitudinis [illegible] et praecedentis [illegible]
quam praecedenti, quod [illegible]
per eam, quae sub vola [illegible]
sit 1° 54′ [illegible] et Mars [illegible]
esse majorem [illegible]
vola pedis, non potest [illegible]
Mars in 2° 56′ [illegible]
cadit, latitudo [illegible]
cedens, si me multiplex [illegible]
meridianeae [illegible]
non longius aberrare possit [illegible]

quod autem, ejus distantiae a capite Herculis 20° 50½′, 47° 21′ et locum arguunt 14° 10′ ♏, anno 1600, non 15° 37° 28′, non 37° 28′.

Ophiuchi dictum est supra capite XIII, quod abundat [illegible] est et in parvula trianguli in fronte Scorpionis, quae [illegible] scrupulorum abundantia longitudinis. Angulus [illegible] rectus est ad sensum. At si numeros Progymnasmatis angulus fit acutus. Probo sic, quia angulus rectus et [illegible] duplicae propemodum rectilineum: igitur ut differentia [illegible] superiorum trianguli 87½′ ad differentiam latitudinis [illegible] latitudinis clarissimae et parvae 51′ ad differentiam [illegible] 21½′. At cum clarissima sit anno 1600. in 27° 36′ ♏, [illegible] 21½′ erit parvula haec in 27° 57′ ♏: non in 28° 7′, ut in [illegible]

Catalogus quarundam stellarum in constellationibus Serpentarii, [illegible] quae a Tychone vel etiam a Ptolemaeo omissae sunt, [illegible] accommodatus: Sed praecisio numerorum non est tanta, ut Catalogo componi possit.

[illegible] Ptol.	16° 36′ ♏	26° 36′ ber.	4.
	18. 12.	37. 15. „	5.
[illegible]	26. 30.	35. 0. „	5.
[illegible]	25. 45.	9. 57.	5.
	24. 50.	6. 42.	5.
	24. 5.	6. 45.	5.
[illegible] Scorpii magnitudinis	22. 5.	6. 42. ant.	4.
	23. 38.	10. 20. „	4.
[illegible]	1. 6.	13. 34. ber.	5.
[illegible]	6. 54.	11. 50. „	6.
	5. 52.	4. 38. „	6.
[illegible]	2. 50.	5. 42. „	4.
	2. 10.	3. 11. „	4.
	1. 48.	1. 38. „	4.
[illegible]	3. 0.	1. 50.	4.
[illegible]	4. 18.	1. 2.	5.

Dexteri pedis	Tibia . . . . .
	Digitus . . . . .
	Dictum . . . . .
	Palmae clara . . . . .
	Vela . . . . .
	Calx seu Talus . . . . .

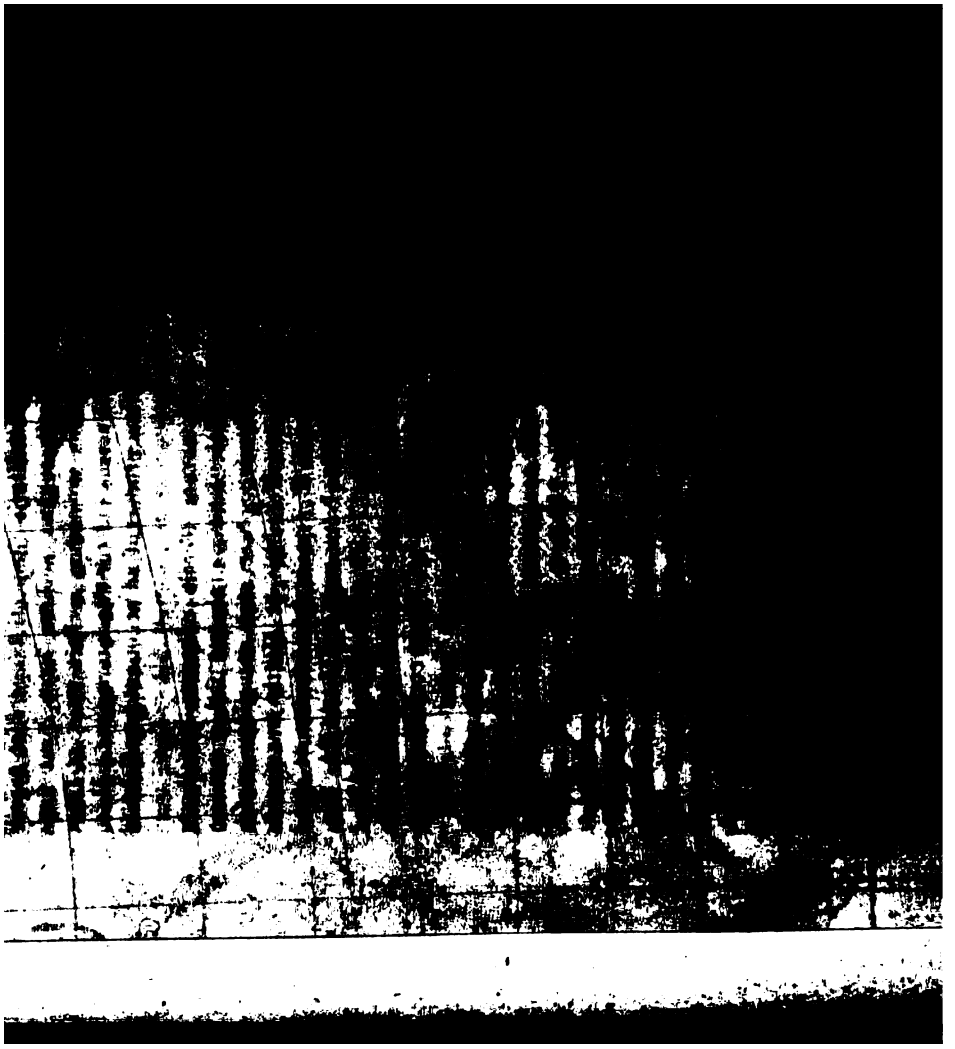
Quatuor infeminum in zhombo ad humerum dex-
trum borealissima . . . . . .
Mediarum prior . . . . . .
Posterior . . . . . .
Tertia . . . . . .

Duarum pagularum supra caudam, superior . . . . . .
Inferior . . . . . .
Infra caudam clara . . . . . .
Post pedem dextrum, socia novae . . . . . .

Trium . . . . . .
caudae superiori, praecedens . . . . . .
Media . . . . . .
Postrema . . . . . .

Proxime infra ultimam, infernis . . . . . .
Cuspis Sagittae . . . . . .

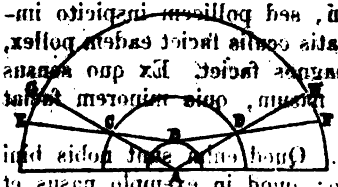
Hae rotae [illegible], in qua AEQ [illegible]
[illegible]; [illegible]; [illegible]
vacui, designant loca [illegible]
1668, [illegible] altum [illegible]
10: Oct. [illegible] die [illegible] primum [illegible]
curvae [illegible] [illegible]
[illegible]



[illegible] pollice, desultabit. Quoties oculos permutaverit, nasus videbitur [illegible] quiescat. Postea ne nasum, sed pollicem inspicito in- [illegible] paulo longius a facie distantem: alternatis oculis faciet eadem pollex, [illegible] fecerat: at saltus non ita magnos faciet. Ex quo sensus [illegible] judicet, pollicem plus distare quam nasum, quia minorem fecerat [illegible] apparentia loci commutationem.

[illegible] quadrat exemplum ad rem nostram. Quod enim sunt nobis bini [illegible] sunt astronomis bina loca in mundo; quod in exemplo nasus et [illegible] illis fixas et remotior aliqua stella: quod hic liber aut pavi- [illegible], hoc illis sphaera fixarum; quia ut pollex et nasus adhuc multum [illegible] pertinente aut libro, etsi oculis solitariis inspecti tangere et tegere [illegible] sidera erraticia non in summo aethere inter ipsas fixas [illegible] sub aspis; videntur tamen in summo aethere esse, et Luna [illegible] mundi inspecta apud diversas videtur consistere fixas. Haec [illegible] aliquibus paulo tardioribus proderunt ad negotium parallaxium [illegible]

[illegible] quod tidus novum fecerit minorem parallaxin [illegible] non majorem quam Sol: adeoque absque dubio omnino [illegible] Duplici via. Primum sic observatum est tidus [illegible] inventus, quibus mense Februario et Martio mensem in [illegible] eadem semper locum inter 6[illegible] quae refractionem et quod [illegible] stellae desiderari potuerunt. Nam anno 1604. 11/21. Oct. [illegible] fuit locus Novae in 17[illegible] 39', 17° 40' vel 17° 42'. [illegible] At 9/12 Febr. quando eccisena fuit observata [illegible] diruta est similiter, in 17[illegible] 40 1/4 pen cor. Scaggii in [illegible] directus est Fabricianus in 17[illegible] 42' [illegible] magis abfuisset quam congruit. Terra semidiametrio et [illegible] sphaera loco [illegible] magnam faciet parallaxin [illegible] Et sit semidiametrus ab octavo [illegible] Magni primi milliaria 23[illegible] fere, distans obversus [illegible] Opticorum [illegible] [illegible] 17[illegible] 20', apparebit tantum sub [illegible]



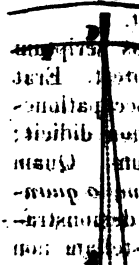
[illegible] 18° ♐, Sed [illegible] utrinque Nova [illegible] A: centro [illegible] AG in [illegible] Octobri [illegible] Nova, tum propinqu[illegible] fuisset ex [illegible] et in BDF [illegible] 18° ♐ in F, ille post G 18° ♐ motum [illegible] potuisset sub eodem loco inter fixas in [illegible] Atque hoc loco quid ego dicam [illegible] conditione nostri temporis. In tanta luce [illegible] consensu philosophorum cum mathematicis [illegible] non plebejum sed philosophum, medicis [illegible] virum, idque non in barbara aliqua regione [illegible] ejus angulo, sed Paduae, in tanta doctissimorum [illegible] Europae concursu: non qui dubitet, sed [illegible] fateatur ingenii imbecillitatem exercitationis [illegible] mathematicorum insolentiam, sed qui [illegible] timens contra hanc doctrinam [illegible] (nisi forte mathematicis aliquis [illegible] ipsi directis argumentis [illegible] quam sibi [illegible] peritis [illegible] Ignoscite [illegible], viri, non mea; nimirum [illegible]

[illegible] additam ad 50° 12′, efficit 50° 22′ [illegible] non [illegible] per [illegible] non [illegible] hosce, cum videam ignorare homines [illegible] ut [illegible] ipse observavitis. Negat [illegible] videri posse, nisi aquilinis oculis. Ac cum ipse hiatus [illegible] ipse unquam observatum. Talem hominem non decuit [illegible] loquere [illegible] quae nonnisi de Stella Nova et ceteris astro[illegible] a doctissimo eodem, quae hactenus ignoravit. [illegible] rum de rebus coelestibus contra mathematicos scriptum [illegible] quanto cum stomacho legerim, dici vix potest. Erat [illegible] legendus in gratiam patroni.[10]) O egregias occupationes [illegible] quod hic aedificat, alter diruit, quia aedificare non didicit; [illegible] tandem denique superavit testio ad reaedificandum. Quam [illegible] meum illud ex Persio: *O curas hominum, o quan*[illegible][10]). Sed haec hactenus. Dictum enim demonstra[illegible] quinquam insaniente imperitissimo philosopho, stellam non [illegible] stabili particulae de 52½′. Jam pergamus altius. [illegible] ut [illegible] 3′ parallaxeos; quia 1200 semidia[illegible] stantes stellae, quique hae 3′ pars undevicesima [illegible] parallaxi longitudinis 52½′ per 19, prodit paulo [illegible] 1200 semidiametris a Terra distat, observatus his [illegible] observata mutatae locum visus esset per 3′, [illegible] in octavo grade et minuto zodiaci, [illegible] stella [illegible] per 36′; quia etiam nulla incertitudo ex causas [illegible] tempore Octobri et Februario utrique a [illegible] est in 17° 40′ ♑, utrique a quibusdam in [illegible] ut [illegible] haeresum ideo, quoniam [illegible] Dyrgius [illegible] Eleteiri [illegible] aquilin [illegible] [illegible] Tellurit [illegible] Solem, [illegible]

pugnent mathesis et astronomia [illegible]
nae; dummodo non ad cujuslibet privati [illegible]
ex more aestimentur [illegible]

Sit ☉ Sol, HKO orbis in quo Veneris [illegible]
prope Saturni ambitum vel Saturni ipsique [illegible]

Fig. 4.



Orphei

lyra

Hipparchi

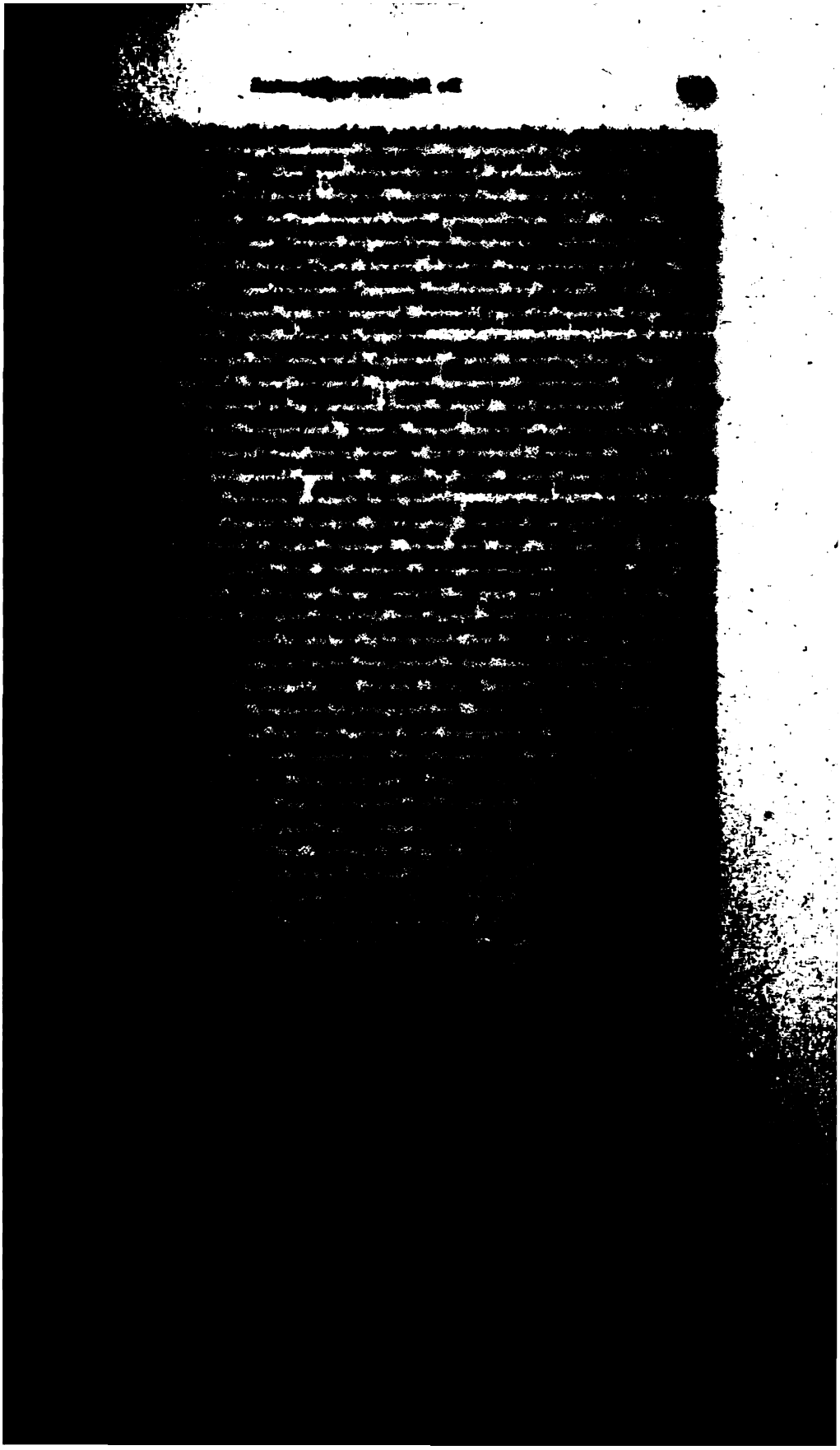
Braheo

poll Pra

[illegible] quasi dimensione et [illegible]

[illegible]

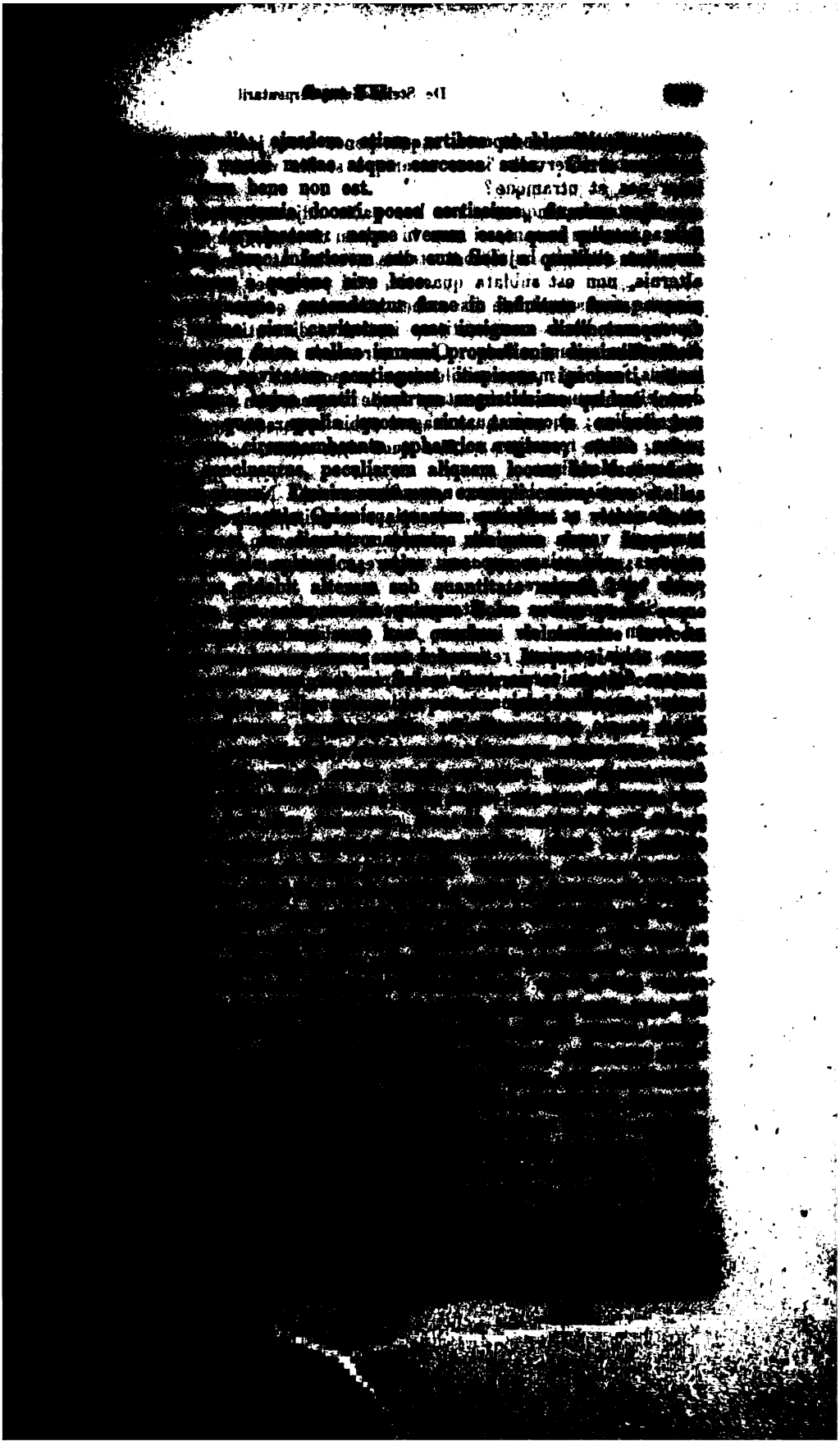
[illegible] good dimensions [illegible]



si propter circuli convexitatem stella descensu peracto coepit rursum a
dere, manente eodem circuli motu: ergo cum esset humillima, debui
fixis transferri de loco in locum, verbi gratia a dextris circuli pa
quibus demittebatur, ad sinistras, quibus rursum elevabatur. (In schem
ab IX ad QP, et ab Y loco apparenti sub fixis ad K.) Dictum vero est
duo minuta, quod minimum aliquid est, fuisse loco motam; nec po
visum testari de minori aliquo spatiolo. Sed ajunt, circulum illum, i
descenderit stella, adeo fuisse a nobis remotum, ut ejus diameter
haberet proportionem ad visus humanos. O rem stultam, stella ips
diametro occupavit aliquot minuta, igitur circulus, quo vectabatur
minor fuerit ipso sidere: quomodo igitur hanc illi apparentiam magnit
ex appropinquando praestare potuit? Adde quod non, ut paulatim vis
minui, sic paulatim et incrementa sumsit, sed subito effulsit maxima.

Fuerunt itaque, qui ante hos triginta annos ista sobrie magis
nerent: stellam anni 1572 in recta a centro sursum in aetherem po
motum suum peregisse. Ii vero et causam dicant, cur subito per in
illud spatium demissa (quia subito effulsit), inde non subito sed pa
revolaverit, et quae causa conversi cursus? Naturalium enim rerum
proprietas non est. Si vero supernaturalem dicunt causam fuisse, an
aeque facile ego affirmare possum, a Deo creatam ex nihilo, ac ipsi d
ab eodem demissam ex alto, cum utrumque ejusdem potentiae sit
Verum et alias saepe et nunc iterum abrumpo disputationem, quoti
absolutam Dei potentiam provocant. Certum enim, nihil nos ad rem
posse, quod quicquam in ullam partem habeat momenti, si naturae te
excesserimus. Hoc potius illis dicamus, illa fixarum infinitate se ipso
labyrinthis inexplicabilibus induere.

Adeoque eripiamus illis, si potest fieri, hanc immensitatem: tunc
ascensus ille per se cadet. Reducitur illa ex antiquis gentilium ph
phorum scholis hoc praecipue argumento, quod Aristoteles ex motu
mundum demonstraverit, Copernicus vero fixarum sphaeram ademto
infinitam esse patiatur. Itaque defendit illam infelix ille Jordanus B
nec obscure asseruit specie dubitantis et Guilielmus Gilbertus libro de
uete, cetera praeclarissimo, religiosum tamen affectum eo demons
quod existimaret, non alia re rectius intelligi infinitam Dei pote
quam si infinitum mole conderet mundum. Sed Brunus ita infinitum
mundum, ut quot sunt stellae fixae, tot mundos, et hanc nostram reg
mobilium unum ex innumerabilibus mundis faciat, nulla fere nota a c
circumpositis distinctam: adeoque si quis in stella Canis esset (puta
ex Cynocephalis Luciani), ei faciem eandem mundi inde esse appari
quae nobis hinc apparet ex nostro mundo fixas suspectantibus.
secundum illos hoc novum sidus novus aliquis mundus fuerit. Quae
cogitatio nescio quid horroris occulti prae se fert; dum errare sese
deprehendit in hoc immenso, cujus termini, cujus medium ideoque et
loca negantur. Et praestiterit fortasse, Mosis auctoritatem obtendere,
nobis aquas exhibentis iisque supervectum Spiritum Domini: tum die se
distinctas aquas ab aquis. Sed quia secta haec abutitur auctoritate C
nicanae adeoque universae astronomiae, quod Copernicus fixas imm
omnis vero astronomia ac praecipue Copernicana incredibiliter altas pr
age petamus etiam ab ipsa astronomia remedium: ut, cujus indul
proritata isthaec philosophantium insania, ruptis locis et repagulis s



altera et altera conspecta atque penes [illegible] inveniantur intervalla inter utramque stellam [illegible] inter nos et utramque?

Fontanis, inquam, res hoc pacto adjuvantur, [illegible] puncta stellae essent, si non in eadem [illegible] dem tui altitudine hujusmodi stellae [illegible] alternis, non est sublata quaestio, etsi [illegible] pluraque [illegible] ut [illegible] vicem esse [illegible] comparatione institutae [illegible] distantiae [illegible] Quae vero [illegible] longius, nec in magna philosophiae [illegible] dem [illegible] detrimentum facile [illegible] magnitudine; quorum quae magna [illegible] parva, [illegible] ut [illegible]

Consequens inquam, non [illegible] ut [illegible] ut [illegible] [illegible] majores, [illegible] [illegible]

[illegible] invenit praeterquam hos octo globulos in ipsissimo et penitissimo [illegible] centro.

[illegible] patet, quantumcunque quis mundum assumat, eam tamen esse [illegible] fixarum visu nostro indice, ut hic noster locus inter [illegible] quid obtineat evidentique nota (quae est a stellis fixis [illegible]) sit a loco, per quem illae disseminatae sunt, distinctus.

[illegible] certum, introrsum versus Solem et planetas finitum esse [illegible] quodammodo excavatum. Quod reliquum est, metaphysica [illegible]. Nam si talis est locus in infinito aliquo, quod ferunt, corpore, [illegible] erit totius corporis, et quae circumstant fixae non habebunt [illegible], sic ut passim tales sint mundi, qualis est hic noster; [illegible] illae hunc locum in forma sphaerica, in sese coeuntes: [illegible] via lactea inter ipsas consita, quae non interrupto [illegible] fixarum orbem permeat, medio nos complexu tenens. Itaque [illegible] rationem extremitatis habent. Terminant enim hoc nostrum [illegible], eius exortu vicissim terminantur. An igitur credibile sit, [illegible] inde procurrere in infinitum? Quomodo autem in infi[illegible] reperietur, quod est in infinito ubique? Quodcunque enim in [illegible] acceptum ab extremis, quae infinite distant, aequaliter, hoc [illegible]. Unde efficietur, ut idem et sit medium et non sit medium, [illegible] contradictoria, quae rectissime quis evitaverit, si, ut intus ter[illegible] spatium fixarum, sic foris etiam terminet.

[illegible] hoc argumentum ab aspectu ductum. Si est infinita [illegible] altitudo, id est si fixae aliquae sunt infinite altae, erunt [illegible] infinitae etiam mole corporum. Finge namque stellam [illegible] certo sub angulo, puta 4', huiusmodi corporis ampli[illegible] distantiae, quod certissimum est ex geometria. [illegible] infinita, diameter igitur stellae est infiniti pars [illegible] partes aliquotae infinitae et ipsae sunt [illegible] est infinita. At simul et finita, quia figurata, [illegible] circumscripta, [illegible] certo angulo. At [illegible]

[illegible]

Caput XXII.

Materiam Novi Sideris Iuxta [illegible]

Rejecta igitur eorum sententia, qui perennem [illegible] et corpus, sequitur ut etiam contrariam expellam, [illegible] vel materia hujus flammae, vel corpus [illegible] esse divinitus aut aliqua naturae vi progen[illegible] tionem, hoc est ad finem omnis disputationis [illegible] existimo. Quod equidem tanto facile [illegible] SQ hanc jam quartam aut certe tertiam [illegible] nine etiam inter nova sidera, quae comata [illegible] gebus faciat immobilium: unde conjicio [illegible] modi sidera protuliisse. Nec nullae [illegible] Vide Progymnasm. Tychonis. [illegible] Quod [illegible] de certo efficiente seu progenitore, et [illegible] prius agam et pertractam hactenus [illegible] riam ex Terra non fuisse. Ex [illegible] aliono pacto stellae generatio (et [illegible] humano) potest naturae vitium [illegible] nihil procreat. Ex quidem, [illegible] demonstrari potest, ex [illegible] [illegible] proxime hanc [illegible] [illegible] stellae; quid [illegible] [illegible] Huc jam [illegible] [illegible] stellae [illegible] [illegible] [illegible] [illegible]

[illegible] distans, puta paulo plus uno gradu. Post haec autem haec [illegible] sinu quodam in orientem excurrit, in formam segmenti circuli [illegible] lactis terminat stella, quae est in dextro genu Ophiuchi, [illegible] est in eodem poplite. Stella vero praecedens ex iis, quae [illegible] ejusdem pedis, tangit idem latus. Rursum procedendo marginem [illegible] terminat stella, quae sub dextro cubito. Orientalem vero stella ex iis, quae in extremo manus dextrae &c. Ex quibus apparet, ten- [illegible] viae lacteae inter duas quasi lineas, quarum altera [illegible] ad dextrum cubitum, reliqua a dextro pede ad dextram [illegible]. Aut igitur in ipsam lacteae latitudinem incidit locus novi [illegible] marginem ejus sinistrum et orientalem proxime attingit, vergens [illegible] lactis portionem; sic ut in illo angusto limite sit compre- [illegible] inter utrumque arcum limitis lactei eo loco distinguit ceu insula [illegible] fluvii alveos. Itaque consentaneum, materiam novae esse ex [illegible] etiam naturalis contemplatio confirmat. Nam si essentia [illegible] pars est densior aetheris (materiam enim aliquam tantis corus- [illegible] necesse est) nemini non verisimile erit, aptissimam esse [illegible] novis phaenomenis.

[illegible] verisimilia, labefactantur tamen objectionibus duabus. [illegible] David Fabricius, quem in observationibus supra quoque nos [illegible] animadvertit anno 1596, 3/13. Augusti (circa quem diem [illegible] ultimo visus est a Maestlino, jam propemodum statio- [illegible] in [illegible]) matutino tempore novam stellam tertiae magni- [illegible] 45′ ♈, cum latitudine aust. 15° 54′, quae post [illegible] disparuit (v. s. p. 597). Ille vero locus a via lactea [illegible]. Altera, quod si naturalis est novorum siderum exortus [illegible] qui ei materiam quaerit ex via lactea), credibile est, [illegible] non adeo infrequentes esse. Quare post hos 1400 [illegible] tempore, fuere, cum Ptolemaeus descripsit viam lacteam, [illegible] quippiam decedere debuisse, tot sideribus incensis exque [illegible] si nondum quidem tantus eorum cumulus fuit, ut [illegible] totum hoc lactis, quod habet, perimerent, quid non [illegible] judicia excipitur.

[illegible] in eo sum, ut credam, [illegible] praetendam.

rationibus facile revelluntur. Quare sic capit Aristoteles bile? Quia (inquit) a tot seculis nihil est [illegible] Aristotelem doceat, succedentibus seculis complu[illegible] versa, libentissime decedet de sententia. At [illegible] ad rationem, sed ad hudam sententiam respicient[illegible] quod is ab experientia petebat, audent [illegible] excipere variis diverticulis quaesitis. Sed re perpensa [illegible] inductione usus esse videtur. De motibus stellarum [illegible] memoria hominum mansisse easdem: et [illegible] qui olim fuerunt, easdemque fixarum constellationes [illegible] (quod oculis non est obvium, quia pellucidum) [illegible] Ergo omnia in coelo sunt perpetua, [illegible] ductio fallit. Leges motuum easdem hodie [illegible] sola et decumana astronomorum hypothesis [illegible] raquia, de tentoriis coeli diversum non [illegible] Et docuisset eadem prior aetas, si [illegible] haec attendere. Proponam vero aliquot [illegible] contendo quodammodo perspici possit: et [illegible] lenti alterabili signo, exemplis aliis [illegible]

I. Primum perfero tibi ex Gaudio [illegible] gium prodigiosae anni 1547, de qua [illegible] per tres dies cum sanguine pertusum [illegible] que in meridie coeperunt, [illegible] per totam Galliam, Germaniam, [illegible] dicens Temporum lib. V. et ante [illegible] exhibent exemplia interque cetera [illegible] hoc toto tempore et anno quo [illegible] extrusum super [illegible] [illegible] per quem Sol videri [illegible] Sedis lumen, sic et [illegible] [illegible] potestas. [illegible] Sedis per eum habet [illegible] [illegible]

[illegible] Deinde quæ hæc existimas fuisse materiam illam, quæ [illegible] integro in pallore detinuit, stellas vero occultavit minimè? [illegible] sub Luna, commentaneum fit, cum orbe Lunæ etiam [illegible] raptam pernicitate motus, et Aristoteles vult ignis ele- [illegible] quia Sol quatriduo integro latuit, per quod tempus Luna [illegible] stetum, non igitur hæc materia prope Lunam, sed omnino [illegible] in ipso sinu ætheris ab omnibus concessa. Nisi forte [illegible] 50° longam primo texisse Solem extremitate dextra, altiusque [illegible] stellas etiam tegere debeit, quæcumque intra 50° pro- [illegible] circumstabant. Atqui legimus, vixdum esse stellas in [illegible] stellas prope Solem non fuere tectæ. Materia igitur, quæ [illegible] tam lata non fuit, et cum Solis loco adhæserit per qua- [illegible] Lunæ orbis interim per 50° discessit, itaque prope Lunam [illegible] stare non potuit. In profundo igitur æthere proximo Solem, [illegible] stellarum quærenda; imo ab eo nobis oblata pro argumento [illegible] æthereæ, quæ stellis liquida circumfunditur, est am- [illegible] argumentum generationis æthereæ omnio ambiens, quæ [illegible] parallaxim doctrina per ipsum æthereis manipum trajiciunt ingentes paulatim languescere, donec denique dissipatæ [illegible] extinguantur. Vide Prœgymn. Tychonis tom. II. et in Opu- [illegible] capitis X.

[illegible] efficacius argumentum exhibent eorum comæ, unde [illegible] nuncupantur. Constat enim certissima [illegible] non habent nec caudas nihil aliud esse, quam [illegible] corporis cometarum tinctas aliqua veluti colore, et refrac- [illegible] gentem a Sole eversam projectas. Docet vero eadem [illegible] Solis alia ab aliqua densa materia, in [illegible] Solis quippe lumen nusquam in aëre cernitur, [illegible] cernitur vero in aqua, quia hæc opaca et [illegible] nec inquinata, tabile aliaque pellucida. Cum [illegible] nihil aliud, nisi lumen Solis, necessarium [illegible] tam late spatium sit [illegible] idoneum adeò reci- [illegible] conflante et in au-

[illegible] Lunam [illegible] atque hi

quaque fuse, pro natura loci, qui inaestimabilis dictat, minimus etiam et maximus

IV. Addo et quartum argumentum mense vidimus. Neapoli totus quidem plane ad modum, quemadmod aliquam; cujus verba ex fol. 848 quidem splendor ipse crescit, non tamen politana vero relatio superioris anni Solem quod quidem non diu duraverit; quasi nigrae nubis circumcirca rupestes undique latitudinis, qui bonam oöe corpus septentrionem coelum obscurum stellas tamen non visas. Ut dictum aliunde ex Flandria, ubi non totali supernae pars circuli Solaris decida quia Antverpiae, citeriori loco visus, declinans ad nigredinem, superior [illegible] Intanse [illegible] constantia [illegible] sed locum dici locum [illegible] quem a Sole [illegible] habere aliquo [illegible] Temporum [illegible] [illegible] per quem sol videri vix potuit

[illegible] de Sole superesset, cum re vera aliquid superfuerit circum- [illegible] quippe umbrae Lunaris desiisse praecise in ipso oculo aut [illegible], ut si oculus observantis fuisset in η: itaque statim ubi [illegible] ad latera ϑ, $\varkappa$ protulerit, ex umbra Lunae in lumen Solis [illegible] hinc exstitisse illum splendorem circumdantem. Tale quippiam [illegible] inepte si bene perpendas. Nam Solem totum tectum non [illegible] aliquis, sed tota Neapolis et procul dubio lata vicinia. Luna [illegible] perpusillo fuit major Sole, ut testatur Anglicana observatio, [illegible] consentientes cum problematis meorum Opticorum. Itaque [illegible] plane in vertice fuisse, quo loco digredientibus uno gradu [illegible], ut ostendit mea parallactica, Luna mutat locum per minutam [illegible] si duobus minutis excessisset Luna Solem: duorum graduum, [illegible] 120 milliarium Italicorum lata futura fuit umbra. Jam vero Sol [illegible] abfuit a vertice. Et ibi loci, parallactica eadem indice, 3° [illegible] requiritur, donec per 2′ Luna locum commutet. Si 3′ Luna [illegible] 4° amplius lata fuit umbra $\iota\varsigma$, milliaria scilicet Germanica [illegible] 360. Itaque si umbra Neapoli apud ι incepit, finis alter umbrae [illegible] Siciliam, quae sit jam apud ς, penetraverit. Quare locus ille, [illegible] in quo inhaesit hic splendor Solis Lunam undique praecingens [illegible] propinquum fuit humilis, nequaquam ad unius milliaris Germa- [illegible], Terris in $\iota\varsigma$ propinquus: aërem enim a meridiano latere [illegible] striatum, a τ versus μ, qui fuere Neapoli apud ι videre [illegible] potuerant, cum Siciliae verticibus et loco ι immineret et humilis [illegible]. Quodsi maxime tale quid repraesentasset aër vicinus [illegible] id non integri circuli forma circa Lunam, sed ab [illegible] Lunae, a qua parte umbrae stetisset observator. (Sit $\mu\nu$ com- [illegible] cum aëre, et partes in $\vartheta\mu$ illustratae a Sole. Splendor [illegible] visus fuisset in partibus Lunae in ζ.) Aut vidisset sane [illegible] Neapoli quidem, nempe ex ι, vel [illegible] attingentem, quia [illegible] in eadem recta sunt ex ι educta, [illegible]

[illegible]

culus vero flammeus atrum discum circumdans [illegible]
Igitur ab hac Solis postione γβ, quae superfuit, [illegible]
qui circa Lunam in ζα, sed et is, qui inter Lunam [illegible]
illustrabatur ex aequo. Nequaquam igitur in aëris [illegible]
deficiens splendore circumfuso repraesentari potuit [illegible]

Addo quod umbra Lunae ια, quae ex Elmilhamar [illegible]
(pars quippe Solis γβ ibi exstabat); multo adhuc [illegible]
dionali latere ex versus Hispaniae [illegible]
intelligatur: itaque circulus hujusmodi ater [illegible]
non comprehendisset Solem et Lunam, sed [illegible]
visus vero parva sui parte, potissima post [illegible]
νε, qui comprehenditur umbra et proinde [illegible]
circumsistentis aëris λμ extra versantis, hic [illegible]
tetus cadit infra lineam νδ, in qua inter [illegible]

Quapropter materiam aliam multo sublimiorem [illegible]
epertat, in qua species flammae discum Lunae [illegible]
impressae, repraesentabatur: et illustrationem [illegible]
etsi hic quoque aër νλ a particula Solis [illegible]
ille tamen splendor ex βδ νκ, hinc ex [illegible]
aëris νλ illustratione non consistit, [illegible]
observatorum descendebat. [illegible]

Rursum idem probabitur, si loca [illegible]
jungantur. Non est verisimile [illegible]
crassitudinem Aristotelis [illegible]
aëreum, qualem Athenis non vidit [illegible]
phaenomena hoc, quod [illegible]
locis [illegible]
Igitur [illegible]
materia splendorem [illegible]

Quaeram hoc, inquit, [illegible]
materiam [illegible]
eique Solem [illegible]
ipsum pertinet [illegible]
[illegible]

[illegible] circumfusa aliis temporibus aliter habeat, jam increscescat, [illegible] deperatur et discutiatur?

[illegible] tantum eclipses hanc rem confirmant, sed etiam citra Solis [illegible] nobis hujus rei documentum præbet. Anno 1559, ut vir [illegible] ad me perscripsit, visa est Hispali Luna juxta [illegible] in Piscibus in ipso coeli medio.[14]) Tota civitas spectabat et [illegible] Quando vero simile novilunium quis vidit? Numquid veterum [illegible] et amplius post copulam primo Lunae aspectui vindicat? [illegible] quinta testificatio est ejus, quod contendimus, nempe materiam [illegible] aliis temporibus sit alia, subtilitate multum a se ipsa differens, [illegible] quandoque claritatis imbibere quam aliis temporibus: itaque alias [illegible] minus occaecare oculos hominum in videndis de die stellis.

[illegible] argumenta ubi locum in academia repererint, tum demum ego [illegible] hujus etiam Novae stellae, quaeque hanc anno 1596. praecessit [illegible] Ceti, et quae anno 1572. maxima in Cassiopeia, denique quae [illegible] in Cygno, quae hodieque spectatur, quaecunque ea sit (cujus [illegible] spectatur), ut his, inquam, novis finis sextae argumentandi locus [illegible] Inscrescere autem quinque prioribus probationibus sufficiat hoc [illegible] similis materiam coeli esse alterabilem, perinde nihil absurdi [illegible] quin dicat, Novae stellae materiam ex ipsa fixarum sphaera [illegible] quasque sustinetur in eadem vicissim esse refusam.

Caput XXIV.

De ejusmodi Novis Stellis.

[illegible] multis contendunt Theologi, eorum contrarii, quos [illegible] stellae esse, ut [illegible] Deo ipso petitum [illegible]

Supra diximus, hoc habere simile stellam [illegible] quod subito ingens reluxit, indeque paulatim [illegible] similium similes sunt effectus, cum hae nobis [illegible] pingui constent, quae seu igni seu lumini [illegible] vero hujusmodi pinguedo sit excretio, facta vel per [illegible] facultatem vel per externum et adventitium [illegible] etiam ad novum hoc sidus in aethere praegigni[illegible] nobis opus esse videtur, qui similia sit naturali [illegible] oculis et omne inflammabile, omne in [illegible] opus esse cujusdam architectonicae naturalis [illegible] in suo corpore sit propagatrix, aeque [illegible] sibi assimilandam eam materiam, in quam [illegible] perennibus gignitur hujusmodi pinguis [illegible] gilinam vocant ab elementis ad coelos [illegible] Si in globis gignitur, quaestio porro [illegible] constat de Terra, pollere illam intus hujusmodi [illegible] alia gignit metalla, quae calorem intus [illegible] digerit, sublimes evaporare facit, [illegible] mirabiles figuras geometricas facilibus [illegible] impressiones occulta, quae suspendet [illegible] quae plura talia dici in Optica. Qualem [illegible] ista, globorum unus, talibus consentaneum [illegible] ditos. Pateret igitur et auctor et origo [illegible] haec materia tandemque inflammatur, [illegible] liquentibus:" utcunque ponas naturalem [illegible] necesse est aliquam etiam aliam, quae [illegible] permeat aetherem: atque ut [illegible] tribus, quae id praestet in aethere, quod [illegible] manifestissima facultas praestet in [illegible] est illa, quae quoties invenit [illegible]

[illegible] ad finem ordinandis admonita. Hoc exemplum quomodo ad [illegible] mundi corpus ejusque facultatem architectatricem sit trans[illegible]ligo. Aut enim sedes ei nulla, nisi in ipso liquido inani: [illegible] stellarum, sedes ei non una: aut si in globo Solis, sedes [illegible], excurrens immensus, infinito similis. Primum dicere malo, [illegible] substantia aetherea unam, qua planetae decurrunt, alteram, [illegible], facultatem similem naturali facultati, quae est in animalibus, [illegible] operi, quod nobis est definiendum, ut appareat, cui prae[illegible] facultatem hanc in coelum introducamus, quae has novorum [illegible] successivas operas juxta exerceat. Cum igitur essentiae [illegible] proprium sit pellucere, neque possit esse pellucidum, quod non [illegible] vel ita ut initio fuit, cum fluidum esset, permanet, ut cry[illegible] quemadmodum in Opticis dictum: coelum atque non de eorum [illegible] est genere, quae duritie quadam hunc effectum retinent, quod [illegible], qui quaquaversum trajiciunt, nihil impediti a soliditate[illegible]. Adhuc ergo coelum cum sit fluidum, debeat vero esse [illegible] consentaneum est, facultatem aliquam ei praeesse, qua in [illegible] retinetur hic ingens campus, idque fieri continuatione cujus[illegible] caloris, quo id coelo praestetur, quod oculi humoribus prae[illegible] vita, ut calore vegeti semper turgeant, constetque [illegible] pelluciditas et figura. Huic igitur animae dabimus hoc officii, [illegible], dum purgat et depurat corpus suum, proprietate sua essentiali [illegible] pingues et impuros cogat et quasi detergat, vel etiam [illegible] stellarum quasi possessionem vacuam usurpet; utrolibet [illegible] materia inventa vel genita, inter fixas, stellam immobilem, [illegible] cometam mobilem efficiat, eo instinctu, quo hanc terrestrem [illegible] animalia diffusam animalcula, ut papiliones et similia [illegible] facultate [illegible] facilius [illegible] quis ex mundo [illegible] velit. Quae [illegible] videntur [illegible] mundi [illegible] cohaerere [illegible] in aura aetherea libere [illegible]

[illegible]

Caput XXV.

Comparatio hujus Novae Stellae cum altera Nova, effulsit in Cassiopeia, et cum aliis.

Dixi capite primo, quantum ex libro [illegible] sidus hoc recens illi priori anni 1572. [illegible] ribus, magnitudine, decremento, quiete, [illegible]

Nec ulla diversitas in duratione, quae [illegible] erat illa mense Octobri vel Novembri anni [illegible] anni 1604. Ita exstincta post 16 menses, [illegible] cum Octobri anni 1605. adhuc videretur, [illegible] sequentibus quatuor mensibus ob Solis [illegible] Februario et Martio anni 1606. [illegible] duplici nomine: utraque scilicet in via lactea [illegible] inter reliquas fixas. Roeslinus vero (Judicium Comp. Vol. I. p. 497) etiam hoc celebrat, [illegible] longitudinem: utramque, quod sequentibus [illegible] enim cum primo Arietis coelum [illegible] etiam in Tauro fuit: hoc autem in [illegible] cap. I. de situ Pisciis utraque [illegible]

Tua nominibus nostra haec illi [illegible] quibus circumstantiis [illegible] quod magni quidem viri, qui primum [illegible] viderunt majorem. Nam si hoc illa [illegible] apparuerit propinquius ad [illegible] supra dictum cap. I. Et oppido [illegible] [illegible]

[illegible] circumcursitabant, vulgares tamen illae fuerunt et de promiscuo [illegible], nulla proprii motus nobilitate insignes. Haec nostra vero [illegible] trium superiorum planetarum sese ingessit, Jove et Marte satellitibus circumambulantibus, Saturno stipatore pedissequo usa. Illa coeli partem [illegible], quae a Tauro signo terreo nomen habet, occupavit, nulla planetarum conjunctione prae ceteris tunc temporis illustrem: haec in signo igneo [illegible], in quo celebratissima illa revolutio trigoni ignei superiori [illegible] initium; quod non nisi post 800 annorum intervalla [illegible]. Illa vulgare et ignobile tempus invasit, nulla peculiari nota [illegible]; haec incidit in eum praecise annum, quem astrologi universi trigoni [illegible] eventurisque prodigiis coelestibus diligentissimis praemoni[illegible] designarant; in eum praecise mensem, quo mense Martis stella [illegible] superioribus ipsa quoque accessit, magnam conjunctionem de Cypriani [illegible]; in eum praecise diem, quo die Mars post Saturnum prius [illegible] etiam Jovem erat assecutus: quid multis, in eum praecise coeli [illegible] quem omnium astrologorum oculi, congressum Jovis et Martis [illegible] dirigebantur. Itaque prior illa mundo non praemonito super[illegible] improvisus hostis, occupatis urbis moenibus prius in foro con[illegible] quam expeditionem ejus fama percepissent: nostra vero vulgo [illegible] tempore, cum multa solennitate et triumphali pompa [illegible] est ingressa, more praepotentis alicujus Monarchae, [illegible] regni invisuri praemissis longe antea metatoribus loca [illegible]: jamque purgari plateae, jam excitis rumoribus vulgus [illegible] moras incusare, cum sarcinae, cum supellex argentea [illegible] subsecuta principis comitatu; dum primi portas subeunt [illegible] per strata viarum et lituorum clangor personant, [illegible] fenestras occupant, plateas complent, pavidi laetitia pueri [illegible] incedunt sublimes in equis heroes aliique ministri: [illegible] sollicitique oculis unusquisque plebis contemplandi regis [illegible] tympanistarum et tubicinum [illegible]

[illegible]

stellas enim perennes. Et Joan. Georgius [illegible] grammaticen docet. [illegible] Cometes enim seu crinita, si crinis stellae superest, cometes, sin infra [illegible] natus est, xiphias, sin cyrrus et extremitatem [illegible] explicatus late, hippeus dicitur. [illegible] Ita cometae figuram spectat, non ad substantiam. Quini [illegible] toribus stellae nomine veniunt. Et quoties [illegible] subintelligunt, ut cometae vox adjectiva sit [illegible] nempe, stella crinita, stella cadens, ubi [illegible] substantiae evanidae.

Eato vero ut speciei vox, cometa, in genere [illegible] lib. II. cap. 25. commemoratae formae [illegible] ad speciem referent hanc nostram stellam? [illegible] pediada vero si dicent, relegandi sunt ad [illegible] Neque quam enim cirrea fuere illa scintillatio [illegible] lacinia reciproca. Nisi forte etiam Canem [illegible] faciant, ea quod scintillationem [illegible] Itaque comedi potest huic sidari nomen [illegible] non sint species crinitarum. Sequuntur [illegible] qui dicit, maximis circum stellis ad [illegible] gium quae auctor julius dicit, [illegible] et Solae nostrae ab antiquioribus [illegible] sequendo est, nostra magis quam [illegible] dicta species in hastam mutatur, quod [illegible] anno Christi 827, ab Ludovico [illegible] observatum Tychone Brahe anno [illegible] tribus his vicibus Sol in opposita [illegible] Sole et in oriente [illegible] [illegible] fine speciem [illegible] contra non [illegible]

[illegible] stellarum motuque visus invenit, non ratiocinatio. Qui vero [illegible] refert quid viderit, sed hariolatur quid eum posset [illegible] eandem cursum mihi projicere creditur a philosophis, [illegible] cetera licet interim cum vico nostro loqui. Vulgus enim [illegible] vulgo dicendi magister est. [illegible] etiam alia utitur responsione, negans eventitia esse solata [illegible] quam in hac stella visum, non tantum in cauda, sed [illegible] quidem ut quae candicantia, livida, interdum rubentia, [illegible] retulit utrique obtinet et inertia obtinent lumina, [illegible] quasi stellae. Equidem cometae capitis argentei [illegible] obtutum avertat, quam etiam speciem Plinius [illegible] mirandae historiis nullum scio. Possum hac loco etiam [illegible] quo supra usus sum cap. XV, ad significandam stellae nostra [illegible] prelum, et caeda carnisse. Crinitae enim eaedem et [illegible]. Nostra haec haesit immobilis. Plinius haud [illegible] quaedam cometarum ait immobiles haerere. Sed facile [illegible] temporum experientia. Potest enim fieri ut [illegible] ut quamvis mobiles videantur tamen ad puncta quidem [illegible] cum Tellure aequo celeriter in eadem [illegible] 1580, cum in opposito Solis versans motu Terrae retrogrado [illegible] (si vel quievisset ipsa) celeritate motus propriis [illegible] directum, si quidem de motu proprio [illegible] visum. Ex illa alterutri 1580, cum motuque Decembri [illegible] motu proprio utitur fere [illegible] linea sine trajectoria [illegible] ecliptica, aequalia propemodum spatia [illegible] Petit [illegible] vel ante [illegible] illo ipso loco conjunctionis planetarum. Habet hoc aliquid [illegible] subtilioris prima illa naturalium opinione. Ita enim [illegible] naturae vim et genuina conjunctionis magnae solotis [illegible] in conjunctionis illius vinculi loco consistere? Nam exemplum [illegible] Cometae [illegible] collegerunt [illegible] cum quanta [illegible] nullum [illegible]

ante Saturno Jovem fuerat associata, et quid [illegible]
praeter tot et tanta causa ludibria, ortam [illegible]
venta Jupiter et Mars frequentabant. Sunt [illegible]
quatuor sententias nobis suppeditat excutiendas, [illegible]
qui cum cometam oriturum mense Octobri [illegible]
dixissent, ut Melterus et Krabbe, jam [illegible]
conjunctio magna trium planetarum [illegible]
sibiris. Quo comecone patum restat quod [illegible]
mense post tres tuptias mihi [illegible]
astrologia possit contigi, imitamur quadruplo [illegible]
generationis [illegible] naturalem; [illegible]
dicta processerit ad hunc effectum, quae [illegible]
naturalem, quae omnia explicanda nobis [illegible]

Hanc igitur astrologorum sententiam [illegible]
eorum, altera alteri contraria [illegible]
Nam qui sunt acute ingenii [illegible]
caetera rerum occultas ex astrorum effectibus [illegible]
universa philosophia, [illegible]
est, ita sese ista videtur admirandae [illegible]
eloquentissimus Tacitus [illegible]
debito hoc aliis temporibus [illegible]
stellas [illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
[illegible]
stella [illegible]
illo ipso loco congressus planetarum [illegible]
sublimius prima illa astrologorum [illegible]
naturae vitam sit gessisse, [illegible]
in conjunctione illius [illegible]
astrologi existimant [illegible]
[illegible]

[illegible] hujusmodi, nova sidera, quodlibet ex uno tesserarum jactu [illegible] positum. Ajunt igitur, concedendum esse, omnino [illegible] hujusmodi jactus, utpote ab ultima aeternitate, quam [illegible] praesupponunt, futurum omnino, ut inter innumerabiles alios [illegible] sic cadat, qui locum conjunctionis magnae cum tempore [illegible] ejusdem copulet. Itaque nil mirum, nullam rationis suspicionem [illegible] inter innumerabilia nova sidera aeterna serie (si daretur [illegible] mutuo, aliqua etiam sub articulos conjunctionum [illegible], et si inter innumerabilia sidera nova, temporibus [illegible] conjunctionum certa, quaedam etiam in illa 800 annorum infinities [illegible] incidunt, denique si inter innumerabiles novas stellas [illegible] periodorum zodiaci coinciderunt, aliquae etiam in ipsam [illegible] conjunctionis meta igitur, [illegible].

[illegible] Aristotelis de fortuna et casu proprius exprimunt, quibus [illegible] fortuito neque coire planetas neque incendi novas stellas, [illegible] in cursu coeli, harum in penetralibus naturae causas [illegible] alteras [illegible] alteris, ex utraque suo loco et [illegible] cum planetarum congressus tum novorum siderum [illegible] si conjunctio cum novo sidere seu tempore seu loco [illegible] hunc fuisse scopum rectoris hujus mundi propositum, [illegible], sed cientem illos orbes coelestes, hic naturae [illegible] singulare studium sola materiali necessitate ista [illegible] ista, ut nos homines, sed tamen neque etiam [illegible] exemplum ex ipsa mera astronomia: longe [illegible] incidere [illegible] Solis [illegible] Lunae, qui separatim quid est a motu Solis, [illegible] Moderator [illegible] naturae [illegible] in hoc Solem [illegible] aequinoctio, sed [illegible] Solem [illegible]

[illegible]

in praesupposito sit, totum hunc mundum [illegible] tantum naturae ordinem conservari, sed etiam [illegible] naturae cursum Coelo Terraque fieri (quorum [illegible] habent), divina bonitate homines ad poenitentiam [illegible] astrologorum primam illam sententiam, partim ut [illegible] simplicem contemnunt, partim vero ut impietatis [illegible] tamen negant, quin ob has ipsas astrologorum [illegible] omnipotentiae miraculum et in tempus et [illegible] divina dispositione fuerit collocatum. Nam [illegible] verum de triplicitate ignea naturam illa [illegible] igneam a Deo qualitatem accipiat, quia [illegible] designaret, sed quia non [illegible] uti conceptibus hominum popularibus, [illegible] rationem tanto evidentius commendaret [illegible] ob oculos. Pharao Rex Aegypti conjecturis [illegible] interpretationibus [illegible] Deus [illegible] ecclesiaeque propagationem et hospitium [illegible] Aegyptii Deum Apin colerent, bovem [illegible] arandum uterentur, ipsis circa [illegible] Nilo agros ipsorum irrigante, [illegible] scientia, septem annos [illegible] Nabuchodonosor Rex Chaldaeorum [illegible] regni Assyrii [illegible] statuam, futurorum interpretem [illegible] Abraham [illegible]

[illegible]

[illegible] superioribus conjunctis quam proxime [illegible] conjunctio Saturni et Jovis anticipavit [illegible] anno 1583, quae illi similior est quam [illegible] igitur 66. Juliano sub ipsam magnam conjunctionem [illegible] et in ipso quidem conjunctionis loco (quod [illegible] utique Chaldaeos ex ipsorum regulis hodieque [illegible] rerum et totius mundi renovatione universali admonuit. [illegible] illud, a quo tempore Herodes infantes Bethlemiticos [illegible] exactoque biennio venisse Magi in Judaeam [illegible]. Fuisse igitur id anno 41. Juliano. [illegible] quae [illegible] Laurentius Suslyga Polonus disputavit, [illegible] argumentis ex historiarum fide ponderosissimis (etsi [illegible] anno differentem legit Kepplerus astronomus, projecto [illegible] stomachabundus esse proripuit de tabula) persuasus [illegible] Dominum natum esse anno non 45., sed 41. Juliano: [illegible] quae biennio ante fulgere coeperat, incurrisse in [illegible] Saturni, Jovis et Martis anno 39. Juliano [illegible], huic modernae simillimae. Cumque [illegible], fecit igitur Deum ipsum [illegible] Magorum [illegible] accommodasse, ut stellam eo tempore [illegible] potissimum exspectabant; forsan etiam, quod [illegible], ad quem locum potissimum Magorum [illegible] congressum dirigebantur, quod in hac nostra [illegible]. [illegible] huic sententiae alia etiam ex speciali theologia: [illegible] prophetae cum hominibus loquuntur [illegible] Jobi, Psalmis et [illegible] quod sanctus Spiritus non nova et coelesti [illegible] apostolos imbuit: [illegible] humana potissimum [illegible] quod [illegible] totum fit. [illegible] nobis [illegible]

Primum, facile est ipsis dicere: conjunctio [illegible] incendit hoc sidus; at nunquam fortasse [illegible] hoc explicare. Si sidus hoc in nostro aëre [illegible] ipsis quaerere, quid commune sit illis [illegible] tanto intervallo ab illis distincto. Nec [illegible] medium partibus fuit a planetis in superiore [illegible] versus interiora mundi ab iisdem recessit. [illegible] quid commune sit planetis cum illa nova stella, [illegible] constitit. Ut taceam axioma physicorum, quod [illegible] sed hic potius in illa tribuit actionem. [illegible] sideris? An est cuiquam verisimile, a [illegible] fonte hoc dictum sunt, ut a minima scintilla [illegible] subito inflammatur, sic hic quoque nihil [illegible] Jovis, Martis exilitatem, quominus [illegible] conciperet tota undique. Hoc vero non [illegible] rata igitur, et quia aliqua tantum [illegible] [illegible] quibus manibus [illegible] [illegible] Nisi forte nova e tribus planetis [illegible] [illegible] est incredibile extituros, qui hoc [illegible]

[illegible] neque ducerum. Namibeant [illegible] ipsum, si quae corpora sunt in [illegible] nunquam ea aliter ex centro mundi nisi in eadem recta videri. [illegible] Inde ex Marte in Novam fuit initio offendatur, Saturnus occiden- [illegible] rigitur neque applicatio radiorum, cervit astrologia pro modo, [illegible] hoc sidus. Superest et credimus, nullum omnino idoneum [illegible] quod intelligamus, planetas hos conjunctos, copulatos [illegible] sublimiorum causas sublimiores progressos esse ad sidus [illegible] [illegible] nobis est secundo, quomodo astrologi rei naturali, qualem [illegible] stellas, assignent causam non naturalem. Id vero ex capi- [illegible] capitibus est perfacile. Conjunctio et omnes aspectus sunt [illegible] Ab relationibus per se, sine interventu medii [illegible] Id igitur dicendum aliquid. Sed illustriorem reddit hanc refuta- [illegible] Metodus Copernici. Relatio namque illa terminatur ad Terram [illegible] tur), non ad fixum mundi centrum. Nam qui oculum [illegible] mundi, videbitis, quae die sidus effulsit, Martem jam in [illegible] Jovis plus quidem locum conjunctionis, intra fines tamen [illegible] distantem a Marte. Quae itaque a nobis celebrantur [illegible] et Martis, ea fuit sic visa in sola Terra. Ubique tabula [illegible] in Terra, conjunctionem eripuerit. Ita quoque [illegible] signetur ab eo, quod apparet accidit ex Terra. Nam a fine [illegible] regionum planetarum: aspectus vel evanescerant vel [illegible] brevissimis spatiis circumire morarentur; certe aspectus [illegible] viderentur, quam tunc, cum ibidem effulsit, videri [illegible] per octo impossibile esse, ut cohaerentes [illegible] ad gigantibus [illegible] astimet cognitos, respondet Jovem [illegible] [illegible] medium [illegible]

Soles occidere [illegible]
Nobis cum semel occidit [illegible]
Nox est perpetua una [illegible]

[illegible] vero [illegible] sententiae [illegible] religiosius [illegible] quadam simul et hilaritas [illegible] hilaritas [illegible] disciplina, quae [illegible] hilaritatem [illegible] Da vitae sanctitatem, ratio sobria erit, et ut [illegible] proclivis. Sic [illegible] Christus [illegible] prodigiorum [illegible] sollicitudinem de [illegible] esse jubet, non quod nihil [illegible] singularibus rebus [illegible] tamen [illegible] illam [illegible] Illam enim [illegible] ab eis. Deinde [illegible] esse [illegible] hominis [illegible] vel casus vel natura [illegible] homines in sui admiratio[illegible] fatetur, [illegible] naturae [illegible] hanc quoque stellam [illegible] Dei [illegible] prodigii [illegible] modo [illegible] Quo[illegible] vel [illegible] Pythagoricis [illegible] nostrorum ab eo aufert [illegible]

[illegible] tesserarum jactus. [illegible] sed tamen [illegible] astrologorum [illegible] Quid si Deus ex [illegible] hac [illegible] quae ipse [illegible]

[illegible] qui [illegible] possibiles eveniunt. Ego vero [illegible] hoc [illegible]. Nam si casus inter jactus dominetur fortuitus [illegible] quolibet jactu poterunt cadere omnia; itaque et illa, [illegible] Quia si cadunt, non cadent igitur alia, [illegible] Ita fieri potest, quamvis infinitis jactibus, [illegible] possibiles non cadant: non igitur necesse, ut omnia cadant. [illegible] nunquam tamen certum erit, an sidus hoc casu [illegible] magnae inciderit. Poterat enim casus hoc praestare, [illegible] non praestare. In incerto relinquimus. Quamquam [illegible] negat, fieri posse unquam, ut veritatem [illegible] Quid in adolescentia, cum abundarem otio, delectatus [illegible] cujus multos adultiores non pudet: Lycophronis Chalcidensi [illegible] literis nominis mei graecis transcriptis varie, [illegible] et pro Ἰωάννης Κεπλῆρος legeretur Σειρήνων κάπηλος: [illegible] Joannes Keplerus sonat per transpositionem Serpens in [illegible] plures sensus reperemque alium, nec tamen [illegible] Chartas lusorias aequali cum literis numero [illegible] literis: inde coepi miscere chartas et [illegible] seriem [illegible] et quando sensus aliquis prodiret. [illegible] casum, qui mihi nihil [illegible] quod ad sententiam aliquam alluderet [illegible] Et erat tamen inter casus possibiles, ut prodiret illa [illegible] Σειρήνων κάπηλος. Itaque chartas meas [illegible] deportandas: [illegible] inter [illegible] quis, disputationes [illegible] quia [illegible] quod [illegible] gravem [illegible] dum fessus a [illegible] [illegible]

chritudine et congruentia hujus, quem dicunt [illegible]
alios delectari patiuntur.

Sed non hoc agebamus, ut pulchritudinem [illegible]
ut ipsum casum everteremus. Itaque quod dixi [illegible]
aeternitate concessa, ut omnia, quae cadere possunt [illegible]
maxime tunc apparet, cum hisce lusoribus multiplicatur [illegible]
tesseris unitatis non est mirum, omnia promiscue [illegible]
esse solent, singulae sex laterum: itaque [illegible]
et una. Cum vero plura adsciscuntur projectilia [illegible]
augentur, multoque maxime in consideratione [illegible]
ipsa etiam tempora (quae quis cupiat adsciscere [illegible]
possint omnia), ea ipsis augent numerum [illegible]
potest accipi temporis, ut omnia cadant [illegible]
casuum possibilium multitudinem, quia [illegible]
infinitis vicibus. *Haec* [illegible] Vide [illegible]
nate eveniunt, casui tribuunt, paucis [illegible]
exemplo ad acervum non sufficit, [illegible]
plicent, aeternitatis suae vim omnem [illegible]
aeternitatem praecurrente, eludunt. Denique [illegible]
effici pulcherrima et ordinatissima [illegible]
jactus improvidi sunt, qui hoc plane [illegible]
sin autem suum casum omni causa [illegible]
in tempore. Quam hoc jactu Venus [illegible]
[illegible] tessellam alio latere supponit, [illegible]
alio impetu animi manuve projecit [illegible]
impegit. Nihil hic est, quod non [illegible]
necessitari. Hoc modo [illegible]

[illegible]

[illegible] posset; tamen nobis hanc stellam hoc loco [illegible]. Et quanto quidem sententia causam subministrat. [illegible], ubi non omnia naturalia defecerint. [illegible] igitur sententiarum trium feritur acerrime. Primum enim [illegible] ipsa novi sideris cum planetarum copula [illegible] quippiam, et quia verisimile, quaesitum quippiam esse: [illegible] mutarine hoc quaesiverit an Deus ipse extra ordinem? [illegible] quia difficile creditu, naturam tantum posse, temerarium [illegible] tribuerit, propterea quod sic ipsum in leges astrologicas [illegible] non [illegible] constitutus revertitur ad pristinam [illegible] consilio processum hunc [illegible], sed materiali [illegible] asserebat. Multa quidem diximus in superioribus [illegible] quibus hoc sidus effectum esse [illegible] sint, jubent nos considerare theologi, ne quid nimis iis [illegible] argumenta esse, quibus persuadeatur nobis, altius [illegible] considerare, ut novum sidus in congressum planetarum inciderit, [illegible] est illi spiritui totius universi tribui possit. Primum [illegible] esse hunc spiritum necesse erit, ut qui ad gubernandum [illegible] ejusque vim ita moderari possit, ut quovis loco [illegible] excitetur. Deinde et scientia amplissima requiri[illegible] qui [illegible] congressus planetarum ex hoc [illegible] sint, et secundum hanc praescientiam [illegible] in [illegible]. Quis est igitur ille, cujus scientia Tellurem, [illegible] complectitur? Denique eximie bonum et [illegible] ad quem haec providentia contendit. Cui enim [illegible] hoc spectaculum? Num [illegible]? At [illegible] sententiae refutatione, [illegible] sola [illegible] sidus planetis associatum. Num igitur [illegible] hoc spectaculum [illegible]

[illegible]

[illegible]

[illegible] condita; status sinistra. Nonne injustitia [illegible] ex sua causa naturali, totus tamen providentiae divinae [illegible] in illis tum praecipue in exercenda vindicta [illegible], quod non solum antecessis in natura [illegible] divinae sit consentaneum? Quare horrenda internecione deleta [illegible] Judaica, sepulta urbs Hierosolyma? [illegible] Josepho [illegible] scriptore quaeras, respondet is tibi, Judaeos invitos a Romanis [illegible]. Vera narrat, si naturae ordinem spectes, [illegible] genitur serie. Nam ex parte Romanorum erat [illegible] injuriae, insultatio, superbia Caesarum, imperii fastigium, [illegible] ipsa gentilitate ortas, deificandi hominum statuas, [illegible] fodiendi; adde armorum concupiscentiam, gloriae cupiditatem, [illegible] lacessendi finitimos vel etiam subditos, ut [illegible] succederentur; imperatoribus materia triumphi [illegible] Dei legum auctoris, numerosa gens, urbs munitissima, [illegible], gentis antiquitas, pertinacia in defendendis ritibus [illegible] Templi, vaticinia vetera et nova, pseudoprophetae. Quae [illegible] consideraverit interque se comparaverit, [illegible] ut Hierosolyma everteretur a Romanis. [illegible] Christi Dei [illegible] et [illegible] gentium [illegible] qui ut hanc vindictam [illegible] turbationem exerceret, quadraginta totis annis [illegible] fortuita videretur [illegible] alterum. [illegible] eundem modum et [illegible] ad Deum [illegible]

[illegible] uterum, ejusdem facultate formatrice, [illegible] coagulatur atque ita denique animal formatur. [illegible] ortu? [illegible] ad Deum [illegible]

[illegible]

cum omnium ipse unus auctor sit, qui [illegible] tissimae globulae [illegible] habitans, suam [illegible] praesens [illegible] stellae, si vel centies [illegible] magnitudinem, accederet. Qui ut lectum [illegible] trium superiorum hoc veluti monumento ad [illegible] gentes [illegible] de rebus [illegible] nullo labore, nulla fatigatione [illegible] in formam tantae stellae [illegible] usus ministra, sitis [illegible] veluti [illegible]; utrinque illud [illegible]. Ipse enim in naturae, dicet [illegible] simplicitatem [illegible] accipit, [illegible] precor, si tamen hoc fas precari, ut [illegible] quoque imperes [illegible] hominibus, quid [illegible] rum Dei digito in [illegible] haberi [illegible] nihil dubitemus [illegible] est hoc ipsum [illegible] Regis Psaltae [illegible]

[illegible]

[illegible] futurorum singularium scientiam expetit, quam philosophiam. Verum [illegible], quia imperfecta esse putetur omnis hujusmodi descriptio, quae [illegible] significationibus etiam occupatur, ratio haec iniri potest, ut primo [illegible], quae naturali vinculo cum stella nova connectuntur, sic ut [illegible] vel causa vel signum fuerit; secundo illa, quae arte conjectandi [illegible] alia comprobata citra connexionis naturalis apparentiam et [illegible] intelligentis naturae providentia probabiliter dici possunt, interim- [illegible] obvia, quae vel astrologi praedixerunt futura vel tempus [illegible], ad veritatis normam an legitime praedicta sint et an ob [illegible] evenerint, examinem.

[illegible] itaque significatio sideris hujus si ulla est, illa ad eum mo- [illegible] explicanda, quo supra cap. VIII. et IX. usus sum in demon- [illegible] efficacia. Statuta est enim omnis influentiae coelestis [illegible] in actione coeli (praeter eam, quae est lucis ad calfaciendum): [illegible] stella haec quamdiu fulsit tantundem fortasse potuit, quantum [illegible] initio, post minus, qualitate vero Caniculae aut [illegible] Arcturo, aut inter planetas Jovi et Marti fuit assimilata, colore [illegible] receptione et sic in passione naturae sublunaris, quae vel est [illegible] simillima. Animis quippe et facultatibus rerum sublu- [illegible] intercedit cum natura coeli; eaque triplex, caloris, motus [illegible] enim lux coelorum est caloris effectrix, et animae [illegible] rerum vegetabilium suum quaeque calorem in corpore, quod [illegible] pro viribus tuentur. Sic stellis additae sunt [illegible] movent, ut plerumque quidem materialiter, seu cum cor- [illegible] quam convenientiae (qualis quidem hic penes nos [illegible]), sed tamen etiam animales: et hic quoque in Terris similiter [illegible] rerum vegetabilium corporibus suis insunt vitae mo- [illegible]

Conditur aetherio dispersit [illegible]
Te dedit in numerum nova in [illegible]
Nasceris, astrorum cano mirante [illegible]
Obstupuere poli; subitique externa [illegible]
Fulguris, aetherium metuit natura [illegible]

Hoc idem enim fundamentum mihi videtur [illegible] luminum efficaciae. Est enim [illegible] (qualitative [illegible] quantitative) et naturae sublunari quodammodo [illegible] exstingui vel averti lumen Solis a demenso [illegible] ordinarie et perpetuo est in Solis lumine. [illegible] animalem, quae luci cognata est, ut affectum [illegible] ciniat. Hoc idem ergo fundamentum sit [illegible] nomenis efficaciae. Per conduplicationem [illegible] magna trium superiorum stimulos naturae sublunari [illegible] ad sese commovendum, et hoc novum sidus [illegible] coniunctionis inciderit, sequitur ut tam coniunct[illegible] planetarum, quam ipsa novitate per se consid[illegible] ordinariae commotioni atque [illegible] Quanquam necessaria est dubitatio, [illegible] an [illegible]; hoc est an natura [illegible] tione magna sese [illegible] averterit [illegible] rum rei [illegible] obruerit et obliter[illegible] illa [illegible] Nec minus dubitare [illegible] [illegible] an tristitiae fuerit [illegible] [illegible] an instigaverit [illegible]

[illegible]

[illegible] et, quod hiemo eaque prodigiosam, iridibus a regione [illegible] Lunae, adde paulo frequentiora parelia, paraselenas et halones, [illegible] nostrâ, hoc, novi sideris effectum fuisse hanc hiemis humiditatem [illegible] coelestium frequentiam: quae ut inter novum sidus et [illegible] magnam hoc cum ratione partiamur, sic agemus.

[illegible] gibbo gemina est facultas (quod meteora attinet), altera [illegible] aquae marinae in occultis concectionis sedes, altera expellendi [illegible] meteora per quendam quasi euderem; aut si malis compara hanc [illegible] excretioni seminali animantium. Harum facultatum alteram [illegible] stimulari ab aspectibus planetarum harmonicis certissimam [illegible] stimulationem efficitur, ut centima quidem (in fluminum generatione) [illegible] aspectus uniformis sit expulsio, sed multis intervallis interrupta ejus [illegible] quod aspectus ordine astronomico incederint. Et me hercule [illegible] quia huic exeretioni etiam voluptatem suam adjunxerit: ita [illegible] animantibus conveniunt. Etenim docent medici, si quando [illegible] tantum venae, facile vel per somnum imagine dulci objecta, [illegible] coitu accedente, fieri excretionem. Quid vero hujus rei [illegible] quod constat inesse in Terra facultatem aspectuum coelestium [illegible] quae stimulata aliquo aspectu exsudet vapores pluviae? [illegible] materiata objecta phantasiae et materiam genitabilem: [illegible] igitur, utrinque ex perceptione speciei et expulsione materiae [illegible] Itaque nunc dominus meliori semen poetam studio, cum [illegible] mysteria:

[illegible] Terrae et genitalia semina pecunt?
[illegible] Tum pater omnipotens fecundis imbribus aetherem
[illegible] in gremium laetae descendit, et omnes
[illegible] magno commistus corpore fœtus.
[illegible] fœmineis omnis arbores pro semine tribuit, quae
[illegible] Ego enim nil transmittit nisi speciem illam. Venerem
[illegible] Tellurem ad effundendum hoc semen, et ex eo
[illegible] venae humorum erupta. Sic igitur habet [illegible]

quod est inter ceteras attrahere alimentum [illegible]
et si placet etiam concoquere. Anne igitur [illegible]
et eclipses continuo fervet opus attractionis [illegible]
Tellure? An sunt etiam hic causae [illegible]
iste redditur serior? Nescio: nisi quod jam [illegible]
logus, post magnas conjunctiones sequi fertiles [illegible]
conjunctio superiorum planetarum stimulabit Tellurem [illegible]
[illegible] juvabitque ejus concoctionem. [illegible]
[illegible] praesenti: primum quod fertiles anni [illegible]
junctionem magnam anni 1603. Decembri [illegible]
virtus ad Nicrum eadem pene, quae anno [illegible]
tionem in Piscibus: nisi quantum ipsa [illegible]
quod et prior hiems post autumnum anni [illegible]
multa utrinque, ostendit Terram [illegible]
igitur hoc tantum humoris habuerat [illegible]
Itaque haec conjunctio Telluri stimulus [illegible]
Iidem igitur stimuli ad hauriendum [illegible]
etiam in animante idem cogunt [illegible]
humorem genitalem et interdum [illegible]
distinctionem etiam adhibebimus hanc, [illegible]
temporis habet latitudinem praecedit [illegible]
causa stimulante ad attrahendum [illegible]
causa stimulante ad excernendum. An [illegible]
summa pendeat, quae momentanea [illegible]
Saturni et Jovis, tam [illegible]
scilicet propinquitatem [illegible]
dum, ut ita causa [illegible]
stella [illegible]
[illegible]

[illegible] Tentatur id historia capitis I. Hoc tempore [illegible] numeros, varias cominationes de rebus futuris, constructiones [illegible], multas aliorum negotiorum impedimenta, multas [illegible]. Quid singulis acciderit, ipsi dicant: me quod attinet, in [illegible] Jovem, Martem, ad Venerem et Mercurium [illegible] [illegible] et dilato labore investigandi motus perdenos [illegible] Drachanis oculos ad novum sidus converti, in eo multum [illegible] quid portenderit novum sidus? Nimirum multus multorum [illegible] sidere, multas typographorum occupationes, quos lucrum [illegible] cupiditas hominum seducebat. Quae si pauciores fuerint, [illegible] meis versiculis idiomate scriptis cominatus sum, nescio, [illegible] operam dedisse, ne veticinium illud meum meis [illegible] [illegible], excusis non plus ducentis exemplaribus additisque [illegible] [illegible], et alium Amberga sedentem Sanctorum [illegible] [illegible] solet echo reddidisse, imitati sunt Amberg[illegible] quidem sunt et hi et Argentinenses. Neque gratiam [illegible] [illegible] meum adimpleverunt, mea ipsius opella, vita mea [illegible] vol. 1, p. 303.)

[illegible] quid amplius, quod portenderit hoc sidus in meis studiis? [illegible] quippe ejus partis coeli non fecimus, sicut in tot [illegible] stellis de saturni arcanis hostes illos, quos [illegible] [illegible] tam multa commentos non decet, quasi [illegible] stella prodiisset. Imo et cultodam philosophorum [illegible] hoc nova philosophia [illegible] [illegible] esse portendisque illam stellam [illegible] [illegible] per se stella potuit [illegible] [illegible] ab astrologis [illegible] [illegible] [illegible] [illegible]

conjunctio planetis superaboleverit? Cujusmodi
vel prophetiae munus arrogat vel potentiae
seius est. Hinc equidem praefiguratum
anno 1606, Januarii die 2/12, natus
quarum ventres inferiores discreti, jecin
brachia atque pedes directae, quorum
cerebellum in geminato occipite, ut
pedesque iterum simul et bina anima
bella intentant, quod hic
subiculum adversus in an
faciem declinarunt; unum par
cordis, unum palmones, unum
semper. Hoc vero monstri
quotidianum est, conglutiture
inde auspicia

[illegible] audiebant, occulto instinctu suae naturae (quod [illegible] [illegible] suspiciebat) ad novationes fuisse proclives. Atque [illegible] motus, quod causas et modos ceteraque rerum singularum [illegible] ex coelo non sunt, nihil tamen impedit credere, quod [illegible] motus per Hungariam, Austriam, Moraviam, Bohemiam, [illegible] per Livoniam, Moscoviam, Turciam, Persiam, Indiam, [illegible] nec in ducatu Brunsvicensi contigerunt, quaeque etiam per Gallias, omniumque maxime per Italiam in negotio Veneto, et [illegible] in acie novaculae, per Poloniam, Lithuaniam, Russiam, [illegible] stella stimulos acceperint: neque adeo cuncta [illegible] [illegible].

[illegible] haec extenuent nec digna dicant, in quae significatio novae [illegible] cum atrociora contigerint olim, quando neque nova sidera [illegible] coitus planetarum superiorum fuerint. Ego vero jam non [illegible] sit stella (fiet id postea), sed quid naturaliter in [illegible] ex novae stellae fatione sequi sit consentaneum, etiam [illegible] novae stellae notitia. Qui vero minora haec existimant, quam [illegible] possint occultam quandam exstimulationem ardoris homi[illegible] sic concepta propter objecta obvia et consueta, sed [illegible] aliqua naturarum acerbitate fiant: iis ego sic respondebo [illegible], quod in nebula ambulantibus, ut quantumvis ipsi [illegible], tantam nebulae crassitudinem, quae circumdantur, non [illegible] nebulam eminus conspexerint ipsi in sudo stantes, tum [illegible] ejus oculis subjectam admirantur. Sic turbas hodiernas [illegible] certum est, ubi tempus aliquod praeterierit, omniaque [illegible] fuerint [illegible], [illegible] judicaturos, dignas tamen [illegible] quae [illegible] [illegible] 1572, post quam [illegible] Cassiopeiae stella, quietae [illegible] per [illegible] in Belgio et Gallia cum [illegible] [illegible] tanto [illegible]

[illegible]

[illegible] junctum novo sidori; ut taceam illos, qui [illegible] [illegible] quibus sidus culminavit, [illegible] [illegible] et naturam sortitos [illegible] [illegible] quasi per manus transmittere [illegible] [illegible] Magna est vis [illegible] [illegible] amicitiaque partium in festum [illegible] [illegible] vel tempore perpetratae injuriae [illegible] [illegible] adoleverint, adeumi solent [illegible]

Hinc est philosophia temporalis filia [illegible] [illegible] exemplis compluribus, si non essent [illegible] philosophia et Magi illi ad Herodem regem [illegible] novam, aetatem, tuncem, novatricem [illegible] [illegible] stella quae edita, superstitum [illegible] [illegible] ex eo consilium capisse extirpandi illam [illegible] [illegible] (Euphemm. Rustinian), qui [illegible] 1572. contrait, in animum ab illa transiit [illegible] [illegible] nati eisdem, ii hoc tempore eleganti [illegible] et cibum gerendis idonei [illegible] [illegible] exorta Magorum stellae [illegible] [illegible] patuerit. [illegible] Turcarum Imperatore, Christianis [illegible] [illegible] Quae de [illegible] [illegible] [illegible] stella [illegible] [illegible] facultatum animae naturalium [illegible] [illegible]

[illegible] astrologorum praedictiones ex trigono igneo [illegible] sequentibus ignei trigoni circumstantiis [illegible] potest, quo respectu id fiat, et quid trigonum igneum [illegible] stella adjuvetur; denique ut fiat separatio rerum, [illegible] decretis conjunctioni magnae adscribuntur, ab iis, quae astrologis [illegible]. Fabricio meo spei metusve et varia praejudicia suggesserunt. [illegible] principia Cap. 26. 27. usurpata credi potest; Deum ipsum [illegible] habere eorum, quae sincera mente ex astrologicis [illegible]tur: et plurimum expediat ea perpurgata haberi. Et dictum [illegible] proximis capitibus etiamque in superioribus sparsim, quid natu[illegible] facultatem globi Telluris eam, quae meteoris praeest, potuerit [illegible] Saturni, Jovis et Martis, quae annis 1603, 1604 initium [illegible] igneo. Astrologorum quidem decreta sic sunt comparata, ut [illegible] hominibus metum conflagrationis mundi injicere possint. Quorum [illegible] jam confirmare incipiebant calidae nonnullae annorum seque[illegible] ipsas vero aestas anni 1606, quae humiditate [illegible] convellit. Sic olim anno 1524, cum astrologi [illegible] aquae luctuosa et horrenda diluvia praedixissent [illegible] nonnulli desertis planitiebus in montana sese recipe[illegible] non aquis illi, sed paulo post sanguine agricolarum [illegible]. Vana est itaque squalorum et siccitatum ex solo [illegible] expectatio. Non minus enim pluviarum, nivium, diluviorum [illegible] annos, quam exacto aqueo trigono fuit incendiorum, [illegible]. Dictum enim capite VI. denominationes ab elementis [illegible] ab igne [illegible] trigonis, non ex natura sua, multo minus ex [illegible] astrologorum arbitrio. O vanitatem infinitam [illegible] tempore incipiunt, nunquam [illegible]

[illegible]

permutationibus seu potius magnis
turbationis rerum per sese mobilium com[illegible]
iisque rebuspublicis, quae jam a multis [illegible]
praecipui tumultus excitati sunt, idque [illegible]
etiam hac vice futurum.

Imperium vero plane novum [illegible]
principatus transferre, mutationes reli[illegible]
molire, seu permittere quae in deterior[illegible]
naturae sed solius sunt imperscrut[illegible]
ulpiorissimum a tam contentis initiis prog[illegible]
etiam non unum saeculum lateant, aut [illegible]
aetatis hominibus contemnantur. Haec [illegible]
ex motu de trigono igneo aliquid
[illegible]ndum accessisset nova stella, sto[illegible]
pora, ut fidenter pronunciavissem [illegible]
mutationibusque talibus, quales astrol[illegible]
neque perpendere, quod proxime
ut vix majora sperando vel exspectan[illegible]
initium trigoni ignei futurum et [illegible]
quae fabulam aut si quid plane nov[illegible]
magnitudinem, stupetubo
[illegible] inutilem et
igitur, [illegible] [illegible]
[illegible]
Christianis, Christiadi de
[illegible]
Regi [illegible]
partes pro [illegible] naturalium [illegible]

[illegible] (easque hoc instinctu praeveniente), fit igitur ut [illegible] (ἐνεργείᾳ) operationum; et facilius in idem opus [illegible] copulantur in coelo radii multorum siderum. [illegible] sidera, hoc arctius etiam se mutuo complectuntur [illegible] subtiliora et acutiora (nimirum harmonica) acuuntur ingenia. [illegible] 1444, 1504, 1563, 1623 conjunguntur Saturnus et Jupiter [illegible] locus coitionum est Cancer et Leo, ubi sunt Jovis et [illegible] apsides, et Saturni quidem, qui latius in septentriones [illegible] sequitur; et ita circa initium Leonis fit mutua itinerum [illegible] Jovis intersectio. Calculus quidem ostendit, annis 1444, 1504 [illegible] australiorem esse, annis vero 1563, 1623 jam septentriona- [illegible] Itaque intra 400 annos vix propius coeunt, quam factum anno [illegible] (in Opticis meis fol. 305 [321] sphalma unius centenarii tolle) et sunt [illegible] scrupula intersint inter latitudines Saturni et Jovis, non equidem [illegible] calculo, ut negare audeam, corporalem fuisse illam conjunc- [illegible] Quo nomine longe anteferenda fuit illa conjunctio modernae, sicut [illegible] similibus an. 1544, 1484, et quae Saturnum uno gradu [illegible] Jove exhibent; anteferenda etiam conjunctionibus in signo Pis- [illegible] 1464, 1524, 1583, 1642, quae Saturnum sub Jovem [illegible] in austrum. Addit vero illis in Cancro vim etiam altitudo signi [illegible] hemisphaerio, cum quae in Piscibus et Ariete fiunt, [illegible] humiliores quam in Sagittario, ut moderna. Denique in Sagit- [illegible] et Arietis initio Saturnus et Jupiter descendunt ab apsidibus; [illegible] Leone ascendunt. Itaque quod astronomicas causas attinet, [illegible] sunt in Cancro et Leone coitus, quam hic modernus in [illegible] quod multitudinem attinet planetarum, haud [illegible] conjunctionibus, quae inde a condito mundo [illegible] illa, quae fuit anno 1524 mense Februario [illegible] Mars quasi eodem die conjungebantur in 10° [illegible] ipsos [illegible] Sol et Mercurius in fine Aquarii [illegible] et ipsi juncti et distincti, Luna 13° [illegible] A. an. 1603 [illegible] Saturnus et Jupiter, [illegible]

rerumpublicarum et religionum habuerunt [illegible] nihil porro expectarent, quod cum iis, quae [illegible] magnitudine comparari possit, quam illa quidem [illegible] magnam anni 1603. sunt insiti, necdum stellae novae [illegible]

Quae igitur [illegible] in hunc modum ex [illegible] deprehendentur, si paululum in historiis [illegible] cum praesentibus libeat exspatiari. Equidem [illegible] acciderunt, at majora vix potuerint, eaque [illegible] ad sensus naturales consensumque naturae [illegible] bus pulcherrime referri possint. Quis enim est [illegible] ex historiarum lectione deprehendat, [illegible] poris prioris, ab irruptione barbararum gentium [illegible] veterno correptum, ad mille annos dormitasse [illegible] ad pristinam alacritatem rediisse [illegible] consuetudinis salutaribus ritibusque inoleverant [illegible] vestigia hodie ridemus, et [illegible] latrocinia nobilitatis erant exercitia. [illegible] pari, magna consequerat in [illegible] Apud Christianos multa barbariei [illegible] longum est exsequi. [illegible]. Quanto per Deum [illegible]

[illegible]

[illegible] enim ob causas, quod ego jam infero, [illegible] typographica facile evenerit, ineffabilem fuisse tunc temporis [illegible] si quis paulo diligentius perpenderit, quotus [illegible] quot exempla quam pauca manibus perficiantur, denique quot [illegible] prius quam a sigillis, quibus Scaliger existimat adhuc [illegible] majores nostros, ad hodiernam artis magnificentiam per [illegible] typographiam nata vulgati libri; hinc universi passim per Europam [illegible] diffusi se contulerunt; hinc aetas tot academiis, tot [illegible] instituendis, ut brevi caderet sorum, qui barbariem refinebant, [illegible] eos extulerunt hominum desideria, denique novi ordinis, qui litterarum [illegible] professo operaretur, auctor exstitit, a quo tempore omnis [illegible] ordinum auctoritas ad hunc transiit; nisi quatenus [illegible] anarum rerum aatagentes, ipsi quoque ad literarum stagia se [illegible] Ex navigationibus et commerciis occasio est oblata Europaeis, [illegible] apud barbaros et hac nunc ignotas nationes latissime [illegible] omnibus lex academiis et libertate disputandi et ex librorum [illegible] typographiae commoditate, mirum ex eruditione et inquisitione [illegible] denique ingens illa et omnibus saeculis memorabilis secessio [illegible] Europae provinciarum a sede Romana. Rem ipsam cum ita [illegible] quibus est descripta, altius indeque a divina providentia pro- [illegible] naturalium causarum angustiis cogendam, plane perspexerunt, qui eam vituperant. At inest in re ipsa universale [illegible] rationis reliqua humanae negotia spectabile; puta inquietudo [illegible] per haec tempora praecipua, de quo solo jam mihi [illegible] quibus iste dicam probatum commemorabo. Cum enim [illegible] omnibus civitatibus esset ortum animi, facileque invicem [illegible] quaeque de re publica; hinc ortae tot seditiones, dissensiones [illegible] religionis quam imperitorum causae. Inter ipsos Malta- [illegible] Christianis et Judaeis maximum genus humani [illegible] nunc, hac saeculo novae civilitatis indorum [illegible] ipsorum exarsit, quae Turcis olim exitium [illegible] anno 1684, 1686, 1692 capitales [illegible] facilius [illegible]

solvere, circumnavigata Europa, in Italiam [illegible]
mediterranea via brevissima euntes, [illegible]
annonae subleavit? Quid habet aquilo propri[illegible]
rei militaris? Quid dicam de hodiernis artium [illegible]
mechanicis, subtilitate incomprehensibilibus? [illegible]
quotquot existant arte typographica in [illegible]
hodie ipse Cicero a nostris tot criticis [illegible]
tetur vero in omnibus facultatibus maxime
annis excuditur numerus, quam mille
nova hodie facta est theologia, nova j
astro medicinam, et Copernicani
vivere, imo et furere mundum; neque
conjunctionum stimulos.

Ita itaque perpensis stultos [illegible]
per hos futuros 200 annos plura
contigerunt, vt quidam naturali ingenii
sustentatio et solitaria consideratio
orbem detectum aut artem v
in altum mundi globum; quibus
est Comparatione temporum Chri[illegible]
utinam res patescat [illegible]
fuit conjunctio magna in [illegible]
igitur, quibus [illegible]
de mutis antea devolutum
non quid hocillo [illegible]
mutatio apud Augustum

Mihi gavisi sum

[illegible] secum maderent. Krabbus dixit eadem de eritura reli-
[illegible] sed oculis a coelo in Regem aliquem Europae impia irruentes
[illegible] retortis,
[illegible] exsurgent non spernendae, magistratibus his intermixtis,
[illegible] professionis succedentibus quasque secum trahentibus provincias,
[illegible] illas didicerant deducentibus.
[illegible] dico, ut is qui solam naturam intuetur. Interim divinae
[illegible] non sunt immemor: quae si natura interdum utitur, ut quam
[illegible] tamen a natura non accipit leges, poenas misericordiam-
[illegible] inter nos qui placuere dispensandi.
[illegible] quidem imperium rerum intelligentes multum de pristinis
[illegible] dispendiisse existimant; nec esse impossibile, illud conspirantibus
[illegible] Persarum hinc Christianorum viribus everti, si nostris nos viribus uti
[illegible] prudentia temperare pergamus. Itaque hac per accidens iis
[illegible] qui in astris illi imperio minitantur interitum. Illi quidem ad
[illegible] stipem accipiunt, existimantes, cum dagum hoc sub aquen in-
[illegible] sub igneo interiturum, nec perpendunt, jam semel sub igneo
[illegible] ab Christi 800. in 1000. perseverasse et convaluisse. Christi
[illegible] ajunt sub igneo coepisse, qui priusquam 200 annis duravit,
[illegible] sub hoc igneo ab anno 1000. in 1806. latius propagandae
[illegible] quod per hos 100 annos sub aquen trigono navigationum
[illegible] per orbem disseminata sit quod spatia Terrarum attinet,
[illegible] ejus origine.
[illegible] ut opto et omnino existimo, jam ruere. Othomanicae familiae
[illegible] naturales tamen causas ex trigono igneo nullas video, quibus
[illegible] Christianam doctrinam amplectuntur, potius Christianorum quam
[illegible] Mahumetani accessuri probentur. Utrum autem aliquid melius sit
[illegible] postquam jam stella nova effulsit, differo in sequens caput
[illegible] Sane jam secundi rumores auditi sunt de Persa Christiano facto;
[illegible] scripti, tanta verisimilitudinis negligentia, ut facile
[illegible] esse simplicium quam narrationes expertorum. Nec
[illegible] multis nostris seu religiosis seu secularibus his in
[illegible] licuit, sed etiam multis ex propriis illis Christi Jesus
[illegible]

et oparta tomescere bella. Nam qui hoc [illegible]
habet, is habet quod illi ab hac conjunctione [illegible]
afferat, ut in apertum prorumpant mala hactenus [illegible]
Hungariam seditionibus, Moraviam deprecationibus [illegible]
rei haec ipsa jam dicta et in hostibus ipsis [illegible]
hic Hungariae, Cassoviae, Moraviae [illegible]
[illegible] etiam Austriam et Styriam, quarum [illegible]
cernum refertur, nostra sub Sagittarium conjunctione [illegible]
vel ipso eventu ego etiamsi incam, a communi [illegible]
mirifice comprobatam existimo. Deteqstin [illegible]
quibus hic conjunctionis locus praecipus [illegible]
et agiles atque harmoniae naturae sint, [illegible]
stimulos persentiscent.

Quae igitur hoc capite persecuti, [illegible]
scripta sunt, antequam novam [illegible]
[illegible] tempore astrologorum [illegible]
Jam porro vero disputabitur, quibus [illegible]
colligendum, pestumam Deus Opt. Max. [illegible]
apposito [illegible] inter haec et [illegible]
[illegible] Ubi, ubi paulo liberalius [illegible]
[illegible] esse, cui [illegible]
Hactenus enim principia [illegible]
libuit; jam porro adaciscemus plus quam [illegible]
[illegible] sub conditione vetus [illegible]

[illegible] quid me facere, quid omittere oportet. Multam equidem [illegible] habet; ea quod ipse quoque vestrum in ea reqnevi providentiam. [illegible] Dii, qui responsa ista dabant, earum rerum animalumque, significationes edebant, potestas et directio transscribebatur. Contra [illegible] animalis aut rei portendentis motum aut apparitionem [illegible] causa, eic ut abesset suspicio supernaturalis gubernationis, [illegible] adhuc ad quietem sese componebant. Nisi forte naturalis [illegible] deprehenderetur inter signum et signatum; qui arbitrio [illegible] et ratione intentis causae opus non esset. Ex neglectu [illegible] nata est magna pars astrologiae. Cum enim multa [illegible] fecissent de Diis per haec superna cum humana [illegible] coeperunt imperiti quicquid in coelo contingeret arbitrio [illegible] transscribere inque omen trahere; praesertim si novitate aut [illegible] vehementer percelleret, ut eclipses luminum, congressus stellarum; qui si ab initio perpendissent, ista omnia rata lege [illegible] fuisse, aut connexionem harum rerum coelestium cum iis [illegible] quae inquirere solent, in natura quaesissent, aut si invenire non potuissent, [illegible] stultitiam nunquam incidissent. Ast alii in solus pu[illegible] stultitia in impietatem: cum enim vidissent stellarum motus [illegible] necessitate dependere, ut tamen et portentis hoc accidere [illegible] Deos sive Angelos introduxerunt, non qui motus coelorum [illegible] ad significandum nobis per illos, sed qui exemplari [illegible] stuerentur in conformandis et administrandis rebus [illegible] illi spiritum infralunam multa millia, rerum diabolorum [illegible] legiones, quibus execrabile ista magia, falso nomine coelestis, [illegible] certa sacrificia, fundere certas preces, celebrare certa festa [illegible] planetarum accendere, errores, [illegible] varios coloris [illegible] hoc demum ritione, conjectatione scilicet, [illegible] ridicula astrologorum doctrina de planetarum [illegible] Jam denique [illegible] nugarum [illegible] impietas; et [illegible] astrologi [illegible]

[illegible] ut[illegible]tur, transcribi posse: itaque et significationes [illegible] ciendas, nisi apparuerit, naturae consuetudine, [illegible]

Cur autem dubitem, liberne de spiritus, qu[illegible] ficantibus, an vero alligates naturaliter ad corpus [illegible] halteo graves. Etenim quae significantur tum per [illegible] et monstra, ea per allegoriam significant, non directe [illegible] natura ludens allegoriis et pictaris rerum [illegible] vellet, rem explicare dilucide; quaereat [illegible] putat, moneri homines in genere neque de [illegible] certiores? at potuit sic monere breviori [illegible] quidam, uno pulsu significantes [illegible] somniorum et monstrorum ambages, per [illegible] ad speciem venire velut? An verum, quotiens [illegible] cunam perdium opaculorum agit, prodit [illegible]

Sapientibus per ambages [illegible]
Fatuis negotium [illegible]

Id est, sapientem nullis oraculorum ambages [illegible] phasitionem sufficere ad intelligendum [illegible] quae somniorum pictaris ostentorumque [illegible] difficile est, humanae naturae rationem [illegible] Calamitates igitur significare per [illegible] canis (quod hominis est) perum [illegible] in quo homine fuerint, cogitare [illegible] cum per labyrinthos hosce [illegible] spiciant praesentia, recolligant praeterita [illegible] in rem Deum [illegible]

Mos iste quidem Dei frequentissimus [illegible] veteris homines perutile [illegible] [illegible] naturae et [illegible] [illegible]

[illegible] aliqui quam per phantasmata, quae invenit in nostra imaginativa; [illegible] esse naturam, hanc essentialem hujus naturae proprietatem [illegible] cum homine phantasmatibus, eaque posse movere, cogitare [illegible] ut quam commodissime conceptum suum intra mentis nostrae [illegible]

[illegible] disputat, sermonis nostri cognitionem, auditus sc. facultatem [illegible] adimet perinde ac linguae usum; ut illa nihil horum sciat, quae [illegible] commercio sermonis aguntur, nisi quatenus variis phantas- [illegible] quae dicuntur, intus in cerebro exprimuntur. Nec tribuet illi [illegible] signandi phantasma, quale ipsi utile ad conceptum suum for- [illegible] sed solummodo signandi inculcandique ejus, quod vi irrequietae [illegible] obvenit ultro intra hominis cerebrum. Quibus modis redigetur [illegible] angustias, ut non possit aliter nisi allegoriis et picturis nobis- [illegible] Atque confoditur haec ratio, eo quod per somnum et loqui et [illegible] : numerum loquelarum et verborum phantasias non minus [illegible] conceptivas concipimus; quodque extra hominem inter portenta sunt [illegible] aut absurdae, ut si bos, si embryo, si Bilenni asina [illegible] quamvis intelligi possunt. Itaque ut qui haec defendit recte [illegible] esse est dicat, aut plures esse hujusmodi naturas rationesque [illegible] rebus vocumque simulacris sensa sua exprimant, aut omnes [illegible] ejusdem esse creaturae, alium tamen alio imbecilliorem et [illegible] vera sit ex his sententiis, utrinque hoc adstruitur, portenta, [illegible] hujusmodi per allegorias explicanda esse. Igitur posito [illegible] seu Dei ipsius seu creaturae rationalis incensa fuerit [illegible] ex me quaeratur, quem ad finem hoc factum putem, et utrum [illegible] ea pertrahenda sint, quae sub manibus habemus homines? [illegible] gentes tantum singulas, sed totum adeo Telluris globum [illegible] ut in ejus complexum omnes cogitationes nostrae, quae [illegible] significatione fideris in altissimo sentire versatae, [illegible] unique mundi amplitudo est, nec absurda Tycho [illegible] vetustas [illegible]

nobis ostendit; et quidem in nostra luna [illegible]
Jupiter Marti et Noxae coniunctus esse visus [illegible]
ait, tam magnum esse in his Terris, cujus [illegible]
pertinerat. Cum hac sententia mihi toto hoc libro [illegible]
est. Respondebo ego Senecae ex Cap. 16: Deo [illegible]
esse illum mundum superum, neque parvos hos [illegible]
sat magnum, quod imago sumus Dei Creatoris [illegible]

Itaque nihil impeditus pergo ad prob[illegible]
et alii varie commenti sunt occasione hujus [illegible]
varia doctrinarum et philosophiae genera. [illegible]
portenta coelestia Dei consilio proponuntur [illegible]
ea quae plane sunt contra naturae ordinem [illegible]
tara, quae sunt in rebus humanis: sin aliquid [illegible]
naturam, ad novationem aliquam in [illegible]
quidem naturam, paulo insolentius tamen [illegible]
nascentia, ad animalia ceteraque talia [illegible]
vientia pertinere. Nihil in Terris [illegible]
cultrice ecclesia. Itaque Deus Optimus [illegible]
cui primum in ecclesia locum dederat, [illegible]
inhibuit, dierum spatia excisa noctes [illegible]
populi Israelitici. Alio tempore eiusdem [illegible]
insolentitate sua depressentem cum [illegible]
delitavit, conversione Solaris, [illegible]
omnes gentes stupendo, [illegible]
Romae concilitavit auctoritatem, [illegible]
ad illa vera fide amplectenda, quae [illegible]
siasium de vestro Messia [illegible]
Dominus noster Jesus Christus [illegible]
latent: nullus neque [illegible]
[illegible]

[illegible] dominum [illegible] coelestis? Quod igitur in coelo [illegible] fiat in Terris novus aliquis homo, qui seu magnitudine seu armis seu dogmate praecipuum aliquam de se famam seu [illegible] terrore, sic hic vi illata seu alia calamitate magnam [illegible] partem exagitet. Anno quo natus Alexander, qui bellorum [illegible] in Asiam translato maximas humano generi clades intulit, [illegible] fulsse refert xiphiam. Anno et quo natus Mithridates et [illegible] tulit, horribiles fulsere cometae. Si cometae coelo discurrentes monarchas, stellae novae non discurrentes, sed eodem [illegible] ad respublicas seu integros populos referri debebunt, seu ad [illegible] per magnam partem generis humani pertinentes.

[illegible] ingreditur, is scilicet, novum ex hoc tempore rempublicam [illegible] quae imperio generali regna hodie varie tumultuantia [illegible] mundus tantum inquietus et ferox aliquandiu sub [illegible] tutela conquiescat. Quodsi addideremus planetas [illegible] existet gemina, prout hoc consideraveramus. [illegible] est Dei mentem ex natura simplici planetarum conjunctio, [illegible] tres, Saturni et Jovis, Saturni et Martis, Jovis et [illegible] qui juncti solent turbare et movere naturam animalem, [illegible] unus finis significari videtur simpliciter post [illegible] periret haec circumstantia, quod stella non in [illegible] sed paulo ante incidit, scilicet ne rutrum aliquid [illegible] cum duobus planetis? Sic et articulus [illegible] conjunctionis; fuit enim in medio diei 9. Octobris, cum sequente [illegible] vidisti stellam. Haec itaque stella [illegible] hostilia [illegible] Virgilium [illegible] Publicae [illegible] Rodolphi [illegible]

superiores conjuncti. Fabricius ad Germaniam
hoc argumento, quod quo tempore stella Tauri
potuit, Aries signum Germaniæ et æquinoctialem
totam stellam in mutationem imperii tribuit, signum
imperii insigni, quæ in re mihi nimium videtur [illegible]
mutamenta eligi hoc pacto variaque signa [illegible]
Sole in medio cœli fuisse; item Piscem [illegible]
item Gemini, quia accidente sexta parte [illegible]
ipsi, non tantum quia tribus superioribus [illegible]
sed etiam quia Sole die 10. Octobris [illegible]
altitudine poli 48°, [illegible]
jure ut notata dignum inculcaverat Fabricius. [illegible]
stella cœlum inibat, et Solem initio vehebat. [illegible]
nos in Sagittario, ut incertum signum [illegible]
anatgali verticalia, posset aliquis ex omni[illegible]
tionem illarum orbis partium omnium [illegible]
atianorum imperium. [illegible]

Fuerunt in hac sola viri splendidi [illegible]
mam hujus Novæ stellæ, cum illa [illegible]
accederit in angulum cœli [illegible]
ter omnium planetarum proxime [illegible]
quod anno 1572. Belgica provincia [illegible]
ann. ante Hispano bello ex hac [illegible]
qui anno 1572. [illegible]
vium regis ipsi [illegible]
de pace inter Hispanos et Belgas [illegible]
auxiliis vicinos Britannos [illegible]
videbantur ipsa consilia [illegible]
[illegible]

[illegible] non fuerit, sed simplicissimus: linea trajectoria, quae solet [illegible] nuncupata. Nam in meridionali plaga sphaerae Martis circa [illegible] ingressa propemodum rectilineo sursum in septentrionem [illegible] ab altro super Solem facto, versus ipsissimum Terrae iter in [illegible] et Scorpionis perlatus, exspiravit. Terrae itaque motus illi [illegible] speciem retrogradationis. Verum istas argutias non fert [illegible] et quid verbis opus? Vicit, vicit inquam, Rösliní argumen- [illegible] magis illum miror. Nimirum uti haec prodigia sunt extra ordi- [illegible] interpretibus quoque opus habent peculiari nec omnibus obvio [illegible] nec aliter explicantur nisi prodigiosa mentis agitatione. [illegible] Confundit Deus artificiosas argutias eorum, qui inflati scientia [illegible] profitentur eligitque sibi pro instrumentis eos, qui vel mente [illegible] simplices sunt manifeste (plurima quippe vaticinia ab hujusmodi [illegible] nostro seculo proveniant), vel incommexis hisce et eorum [illegible] stultis argumentationibus indulgent credili. Itaque etsi [illegible] nihil concludit: agnosco tamen divinam virgulam in [illegible]. Dixeris glebas plurimum quidem arenae continentes, [illegible] alicubi auro. Et ita veris est, qui auro inhiat, huic pigere [illegible] terrae immani cumulo. Nec moror, Röslinum ex [illegible] loqui, ut cum anno 1596. nondum talia contigissent, quae [illegible] expectationem et illam suam catastrophen in annum [illegible] quippe naturam eam, quae prodigia nobis procurat quaeque [illegible] conceptibus uti humanis (quorum plurimos nobis gignunt [illegible] loco literarum, quas admirabili arte ad placitam senten- [illegible] colligat et componat.

[illegible] quid scripserit vir ille Haganoae 4/14. Octob. anno [illegible] nihi plus erces admirabunt, quod inde a viginti [illegible] 1552. et cometa anni 1560. prodit, hoc anno 1604. [illegible] [illegible] suspicit. Rogo autem, legat quae tractatus [illegible] de cometis anni 1580. et 1596. [illegible] anni 1580. [illegible] intendere in hanc novam stellam, [illegible] quae nunc stella fulget et conjunctio magna Planetarum [illegible]

circumstantias consequitur, sed componit signa [illegible] Tycho Braheus in Progymn. Tomo I. fol. [illegible] hendit. Fuerunt igitur, qui infausto omine [illegible] esse orientalem lividam, annotarent: ac si quod [illegible] occidentis, pro eo statu quo nunc floret, [illegible] conditio portenderetur. Haec circumstantia [illegible] res a stella significatas inter initia fore [illegible] stratus, qui a Solis accessu ad stellam [illegible] significetur, occultatum exque hominum [illegible] non abolitum iri, sed post aliquas moras [illegible] tamen in eo vigore quo initio coeperant, [illegible] Hungaricas; spe pacis interjecta [illegible] pacis tractatione recrudescant. At [illegible] novam paulatim languescere et denique [illegible] quae non quaesita sit a Deo, ominosa [illegible]

Quibusdam mirum in modum placuit [illegible] Germanico per verba [illegible] in hunc modum [illegible] praefracti senis et Jovis superbi Martisque [illegible] Jovis celebratis, Jovem et Martem [illegible] stellam elegisse, quam eadem humilitate [illegible] Quo facto discessisse in suum [illegible] [illegible] accingi, ut in Novam [illegible] submittat, siquidem illa daret, et [illegible] Temporaneam hoc quidem esse, [illegible] tamen et reversuras, Nova tunc [illegible] leviter in hoc genere distincti [illegible] Credo, ut pueris ingrata, quies [illegible] conjecturis exerceant; [illegible] omnia conjectandoque. [illegible] interpretationi [illegible] Fabricium. Nec [illegible]

[illegible]

[illegible] et [illegible] septentrionalis significabat aliquem heroem Pythagoreum, [illegible] tempore periodo sua peracta ad vestigium hujus gradus ceremonialis ascensus deinique descensus, etiam apud facto in hunc [illegible] venisse. Notabitque hujusmodi aliquid, anno 1572, [illegible] inaugurasse in altissima parte viæ lactæ in Cassiopeia; anno [illegible] paulo humilius in eadem lactea et imagine Cygni: hæc [illegible] ex boreali zodiaci plaga proximum ecliptica: non igitur [illegible] descensum esse, qui 32 annos duraverit. Ex veteri vero [illegible] astrologia stella fragrans, insessa in posteriore pede Aesculapii, qui [illegible] manibus, Scorpium pede calcat, monebit nos, ingruere [illegible] pestem venenatissimam: quasi hæc stella pedi Aesculapii sit [illegible] et pedem proferat, moras rumpat, auxilia exprecetur, simul [illegible] pro peste hac oleum scorpionum et theriaca commendaretur, et [illegible] ex humore humio divinitas significaretur.

[illegible] alias hujusmodi conjecturas; quas utcunque magno [illegible], nulla tamen est, quæ nos ad speciem deducat. Atque [illegible] existimo: si Deo placuisset, aperte hominibus quod vellet [illegible] cœlo exaratis scripturum fuisse; frustra itaque homines [illegible] divinæ voluntati obnitit. Sed tamen me reprimo iis ipsis [illegible] supra posui hoc capite: dum consentaneum esse dixi, [illegible] prepositione nos invitare velle ad penitus inspicienda [illegible] excutiendosque omnes angulos, sicubi forte latentem invenimus; [illegible] stella hæc digitum intendit. Nam ita me Christus [illegible], [illegible] facienus de impetis deque variis hominum negotiis dicta [illegible] nostri miraculi plane vilescunt. Itaque habet cum [illegible] exultantes: quasi vero non majora negotia sint in his [illegible] Belgicæ, Britannicæ, Hungaricæ. Ipse Réalinus [illegible] contigisse ex anno 1572, quod cum magnitudine illius [illegible] comparari possit. Quæ igitur tam facilis esse in assignandis [illegible] 1572, eventibus ex medio earum-petitiorum deus deliquit, [illegible] priore anni 1572. potior [illegible] capite XXV. et [illegible]

[illegible] astrologia nil tandem, quæ sunt penes [illegible] excutiantur, quibus circulis prophetissæ [illegible] quæ nobis jamjam instant per hos tam [illegible] [illegible] Magnum, qui [illegible] Mensali [illegible] stella [illegible] [illegible] [illegible]

Pellimur ab oriente in occidentem, ibi artes et navigandi peritia stupenda, et novas Indias. Nec desunt exempla ex aliis expulerint, pleramque Scythicas occiduas. Quid si ergo ingens aliqua illos terrarum tractus, et propagatio fidei traductio illorum ad civilitatem, et non extrema exstirpatio? Quorsum digitum ex astrologia Sagittarii signum et trigonum favere religioni Christianae, ut et Rosinus, Sol stetit sub exorta stellae quippe, Deum his uti conceptibus hominibus.

Circumferuntur passim vatinia evincere volunt, hoc esse tempus, quo placebit, Deum hoc ipsum indicare tario, quae est triplicitas Solis et Christianis favere dicatur ab positur), Mars vero Turcis in latitudinis plaga. Mars vire esse potuit deprecatio igitur Turcicum astrologice coniecturis magicis, minquam forte meliorem lucer necum ipse. At est his et contentionibus liquet credibile, inter causas, cum, et, ab, frequentis mifia, Christianismo perventurum

[illegible] quam tamen aliquis ex ipsorum medio ut instrumentum Dei [illegible] (Deus enim numerabilissimus est, quae in carnem [illegible] quae per infinitas persecutiones locum tamen inter [illegible] habitandi idque procul dubio ex dispositione divina, qui [illegible] surgit ut vult. Et quod summi miraculi loco est, hostem [illegible] ipsa etiam. Eripe ex Christianorum vita avaritiam, inhumanitatem proximi, fastum, compositatem in vestitu, libidinem: [illegible] nunc quidem vivunt, e rerum natura funditus exsterpaveris. [illegible] clamat, gentem hanc etiamnum hodie in parte esse divinae [illegible] quia factum est, cum omnes nationes invicem confusae et permixtae, adeo ut pauciissimae familiae originem a millesimo anno repetere possint, Judaei restent, quorum notitia mundo coaeva sit. Itaque si quis [illegible] qui locum D. Pauli allegatum aliter forte intellexit, à [illegible] experientiae nihil denegatum voluit, memor generalis regulae, [illegible] verisimiliorum genuinum statuit interpretem. Comparet lector [illegible] Pauli: „Caecitas ex parte contigit in Israel, donec plenitudo gentium [illegible] Israel σωθήσεται." Comparet inquam haec cum phrasi [illegible] 21, v. 24. „Et Jerusalem calcabitur a gentibus, donec impleantur [illegible]." Ducunt autem nos eaedem verisimilitudines in causa [illegible] prima in causa Turcarum. Dixit mihi doctus quidam [illegible] Christiana altum: „Hodie vos multis millibus milliarium propius ad [illegible] quam uxores vestri." Nimirum ut est genis virulento et animo [illegible] calumniarum studiosa, Christianis multas blasphemias tribunt. [illegible] occultae Dei providentiae transscribendum puto, quod hodie [illegible] passim occasiones Judaeis calumniarum praecidunt. [illegible] Judaeus mihi dixit, in confesso esse apud ipsos, ab annis 50 [illegible] tractari a gentibus quam olim. Et celebrant decretum Solymanni Imperatoris, qui anno 1540. voluerit instaurari muros [illegible] et aquas per tubos deduci in civitatem. — In genere [illegible] Christianos unitatis contentiones et differentiam [illegible] 40 [illegible] quae sit occasio convertendi [illegible] Indorum, inde Judaeorum et Turcarum. Quorum [illegible] de Indorum idololatria ejusque remediis [illegible] Indorum, [illegible] in hunc [illegible]

[illegible]. Itaque et aquae benedictae usum et [illegible] et cereorum et palmarum et ceterorum, quae [illegible] neophytis, perquam opportunum esse sibi persuadent [illegible] in concionibus popularibus multis laudibus prosequuntur [illegible] novis religiosisque signis imbutos assuefaciant [illegible] tioribus occupati, obsoletam sectae suae superstitionem [illegible] deponant. Haec Acostus. Quodsi quis jam M[illegible] Judaeorum studia, his Indorum e diametro [illegible] concludet, contrariis etiam remediis invitatum [illegible] dicto Gothorum facillime omnium ad [illegible] tum ad saniores coetus Christianorum, maxime [illegible] suae retinere possent (1. Cor. 7, vers. 1[illegible] vero Indis proposita remedia vix unquam per[illegible] ubi convenire nos Europaei non possumus [illegible] tibus, alteros ad Indos, alteros ad Turcas [illegible] consilio utrosque conservatos alteros ad [illegible] orientem collocavit, ut locis divisae [illegible] et quaelibet si non sibi saltem gentibus [illegible]

Jam quod attinet factiones Christian[illegible] Apocalypsi D. Joannis, ex propheta [illegible] aenigmate proferre, quid quaeque pro se [illegible] prophetiis expressos applicent, quomodo [illegible] praedictum altera adhuc expectetur [illegible] sine suspicio aliqua ex his [illegible] illi [illegible] Judicis vivorum et mortuorum [illegible] tradixerint eandem Serpent[illegible] serpentis, videant [illegible] haec stella pedi ejus posteriori pro[illegible] Scripturis, praesertim Apoc. 12. [illegible]

[illegible]

[illegible] ecclesiam Romanam aut ab ea discesserunt. Illi credunt Antichristum; hi credunt Judaeos adhuc convertendos, utique [illegible] praedicandum Evangelium per totum Terrarum orbem omnibus [illegible]. Nostri igitur certi sunt, jamjamque imminere adventum [illegible] non possunt hanc stellam aliqua peculiari ratione ad Christi [illegible] accommodare exque ea tempora dinumerare metasque praefigere; [illegible] Deus sibi reservavit. Interim non sane peccant, si hac [illegible] vitam instaurant Christianam itaque se comparant, ut [illegible] Deumque jamjamque exspectari.

[illegible] qui stellam hanc lubet ad nostras Europaeorum trahere contemplationem fit capitulatio omnium fere conjecturarum, quas hactenus [illegible]. Nam Sagittarius repraesentabit ecclesiam Dei (posito quod Deus [illegible] utatur conceptibus astrologorum, quod non omnes tamen [illegible] ejusque hoscitanter suppono); tam astronomice, quia in quo signo [illegible] hodie planetae, in eo signo initium est trigoni ignei, quam [illegible] quia Sagittarius est domus Jovis. Et quia conjunctio Jovis et [illegible] fuit et stella paulo ante illos junctos stetit quoad diem [illegible] et Sagittarius triplicitas habetur Martis et Solis: itaque maximam [illegible] novationem, et ut cum Röslino loquar, *renascorum*, [illegible] nostram, ut astrologi esteri suggesserunt, significat; et quia [illegible] illos in die et loco tam longitudinis quam latitudinis, ideo [illegible] publicetur; et quia stella stetit prope viam regiam plane[illegible] confusionis et exorbitationis abrogationem et ordinis reduc[illegible] alii de redditu ad catholicam ecclesiam, alii de simplicitate [illegible] accipient. Et quia tunc fuit initium igniei trigoni, qui [illegible] praecipuis rerum gestarum capitulis, ut creationis mundi, [illegible] (vide cap. VII. et Tychonem Brahenum in conclusione [illegible]), ideo significatur aliqua revocatio ad principia Chri[illegible] stella fuit altior Jove et Marte, et cum illis, quorum [illegible] auctoritatem, hic inquietudinem, pugnas, rixas, [illegible] et impetus temerarios significat; ideo eximiunt ab [illegible] conferunt. Et quia stella non fuit cum Saturno: [illegible] contra per Saturnum; sed quia fuit cum illo [illegible] latitudine, ea re adumbratur nobis Saturnus, [illegible] antiquitatis, constantiae, consilii, prudentiae, severitatis, [illegible] restaurabitur publico cultus disciplina ecclesiastica; non [illegible] sanctimoniae [illegible] fidelium et christi[illegible]

Addent aliqui et tempus; mirum quia [illegible]
Saturnus ad Novam venit, rata igitur futura [illegible]
Et quia tunc Sol quoque praesens fuit Saturno [illegible]
multum habebit solennitatis eritque absurdita [illegible]
per literatos: non in contentu aliquo publico et valde
personorum, sed per literas. [illegible]

Quamquam, quod hanc determinationem [illegible]
extra principiorum nostrorum limites. Nam si [illegible]
18° ♐ ob congressum Jovis et Martis [illegible]
gressus iste Saturni cum Nova post [illegible]
non quaesitus a Deo. Aut igitur Deus [illegible]
praevisam specialitatem motuum coelestium [illegible]
(nihil enim hominibus mittit propter coelum, [illegible]
hominibus, significanda ponitur uti coelo); [illegible]
coniunctionem cum Jove et Marte significavit, [illegible]
naturaliter poterit illa, quae de anno [illegible]
est absurdissimum), statuere de re divinitus [illegible]
modum: aut quia neutram horum [illegible]
Nova non poterimus ad conjecturas nostras [illegible]
non difficile est colligere: quia stella [illegible]
significari valde dubitatur. [illegible]
Quamquam haec ego de [illegible]
quaeta nuis ad Eccliastes. Quid [illegible]
illa religio Saturnia vel illo prophet[illegible]
cum Saturno coniuncta [illegible]
quae omnibus mihi [illegible]
omnes nationes [illegible]
Saturnus regit, Saturnus contrahit [illegible]
[illegible] pressus et conatus omnis [illegible]
[illegible]

[illegible] pelagorum gratiam alia scriberem pareerga, quibus abste-
[illegible] ipsum forsitan eo ἄγος quod tracto universi peglis-
[illegible] circumscriptionem maximi beneficii loco habeo: cum eaque
[illegible] licuisset typis exprombre libere et extra limites
[illegible] meae, propter cognationem rerum in politiam et ecclesiae statum
[illegible] hodie partes esse pugnantes; quae scriptione mea non
[illegible] scilicet „Hiaces inter aures pecatur et extra." Nec nullus
[illegible] mihi eventurum, quod aliis; quod et Fabricio, cujus scriptum
[illegible] hujus stellae nihil aliud continet, quam querelas de stia
[illegible] de statu Imperii et desiderium vindictae atque emen-
[illegible]

Itaque sic format sua oracula, ac si ab eo magistratu sub quo
[illegible]ductus esset orator, partim ad terrendos rebelles et malos vicinos,
[illegible] conciliandum et excitandum Caesarem. Sic Grabbus plane con-
[illegible]sit, ostendens res Christianas perire per secordiam et somnolen-
[illegible]tiamque hostem hoc pacto convalescere. Nec perpendit, quae-
[illegible]rat seu vera seu falsa, frustra se narrare; non enim erant ista
[illegible] in prognostico, sed in arcano consilio, aut tacendum; cum nihil
[illegible] nobis dicat, morborum vero indices semper plures sint quam
[illegible] Atque his rebus hi sese deridiculo exponunt multorum. Saluber-
[illegible] consilium mihi cum haec mea conditio, tum Deus ipse sup-
[illegible]plo shi: qui generale signum omnium partium oculis exhibuit
[illegible]: et admoneret singulos, in se descenderent suaque vitia exami-
[illegible]tis suis erroribus suisque sceleribus ad veram poenitentiam
[illegible]. Imitatus est hoc idem ut plurimum et Tycho Braheus,
[illegible] quid causae sit quin presse aequar.

[illegible] magna est vulgi vanitas et perversissima consuetudo: qui
[illegible] divinitus exhibito statim oculos et aures ab illo ad inter-
[illegible]rent, hunc ipsum pro novo habentes portento; solliciti non
[illegible] is utatur, sed omnino quidnam dicat eventurum verissimum
[illegible] existimant, unius astrologastri gratia et ad commen-
[illegible]tiones opiniones incensum esse a Deo sidus in aetherc.
[illegible] vulgo per calumniam vel exaggerationem tribuo: res ipsa
[illegible] Interpende quaeso quis paulo religiosior, paullo ad [illegible]
[illegible], non ut omnes astrologi veces tanquam totidem ad oracula
[illegible] existimans occulta Dei dispositione digi gerique omnia;
[illegible] vitiositatem argumentationum, quibus astrologus utitur.
[illegible] nulla aliquam declaratio est adhibet, quae intra terminos
[illegible] astrologi, ut astrologo, ut hominis animi [illegible] per cir-
[illegible] [illegible] publicorum
[illegible] hoc ut nisi
[illegible]

coelo ponunt nec quemquam nisi eventum [illegible]
eos, qui hos pro meritis suis [illegible]
signum et alios facessant ibique esse ob[illegible]
ego astronomicis et naturalibus speculation[illegible]
materiae infensissimos abstineant. [illegible]

Ceteris, qui horum contrarii temperantiam [illegible]
hasce me bonum et pacificum Germanum; qui si [illegible]
quod minimum esse videatur, id imputabunt [illegible]
generaliora erant exequenda; sin autem [illegible]
ipsis non satisfecero, perpendant hanc esse [illegible]

Non eadem sentire [illegible]
Incolumi licet semper [illegible]

Nec quisquam sit facilis esse potest [illegible]
ego facilitate parendi non sim [illegible]

DE STELLA IN CYGNO.

Keplerus in sequenti opusculo ea refert, quae ipsi innotuerunt de [illa] hac primum conspecta. Ipse primum dubius videtur, utrum illam [illa] pronuncietur hec ne. Adhibitis vero Tychonis observationibus com- [illa] in illa coeli regione, in qua conspiciebatur haec stella, comparatis- [illa] Ptolemaei pronunciatis de Cygni asterismo, verisimile ipsi esse affirmat, [illa] illam esse censendam.

[illa] in „Uranographia" eam notavit litera P, his additis verbis: [illa] stella anno 1600. primum conspecta, eundem adhuc retinet [illa] Stellae α, β, γ, δ, e crucis effigiem constituunt; his P adjungas, [illa] inclinantis formam habebis." Per aliquot annos invariatam retinuit [illa] Magnitudinem, a. a. 1622. vero e conspecta redijisse [illa] anno 1655. et 1665. iterum conspecta est ut stella tertiae magni- [illa] tudinis autem post diminuta est ad stellam 5. magnitudinis. Locus [illa] hujus loco illius, quam magnitudine = 5 exhibet Argelanderus [illa] „Nova" (Berolini 1843) in ab. recta 302° 56' decl. 37° 32'. [illa] stellarum Piazziane notatur numero 89. in eodem Flamstedii [illa]

[illa] mense Maio anni 1602. primum ea de illa Keplerus [illa] Spectat hic sine dubio Davidem Fabricium, qui in [illa] Abrz v. et. 1602. Ad Keplerum [illa]

[illa] Divina Colonia, [illa]

ritione invecti. Quia color rutilus, extendit eam Matthiae [illegible]
ostendit magnam spem gratiae divinae et liberationem, [illegible]

Sed de hujus stellae apparitione, loco, motu, forma, [illegible]
gratiam suo tempore agere constitui, ubi et alterius vajundam [illegible]
sante generalem illam Germaniae pestem (?) apparebat) et a me [illegible]
nae, non mea de futura magna conjunctione ♄ et ♃ in ♐ [illegible]
addidam; sub Cl. Principis nostri nomine edam, etsi ipsius Celsitudo [illegible]
non frustra occupatur. Simile descriptionis brevissimae exemplar [illegible]
dini ejus transmisissem, sed Tua Magnificentia ipsius Celsitudinis [illegible]
hujus phaenomeni novi delineationem exhibere [illegible]

Haec pauca tuae Tempori T. M. [illegible]
animus tuus, curarum mole gravatus, in hisce communibus [illegible]
cordem filium Dei sese convertat, et spe futurae liberationis [illegible]

Hisce vale et Fabricium mutuo ut hactenus [illegible]
(Resterhavise) &c.

Tuae Magnificentiae [illegible]

Quae dicit Fabricius motus paulae in principio [illegible]
quotidie bellum, non tantum a rebellibus Emdenensibus [illegible]
De edita tunc temporis observatione sua hujus stellae [illegible]

In literis d. 24. Sept. v. st. 1602. Resterhavise [illegible]
perplexus sum; si vere nova est, cur [illegible]
Nota in Cassiopeia non est observatum. Denuovo [illegible]
observationes pulsus diu fovi. Nihil [illegible]
Eubomedides.

Quarto abhinc die (29. Sept.) Aurich [illegible]
per 2—3 dies continuas, et observavimus [illegible]
[illegible]
Resiqua (d. 4/14. Nov. 1602) [illegible]
1 stellasi a priori loco distantem [illegible]
[illegible]

Quinto Keplerus [illegible] (d. 2. [illegible]
plus quam tu scio et per 10 [illegible]
Tychonici tamen invenient eam [illegible]
diem Novembr. 1602. [illegible]
[illegible]

[illegible] Kepler [illegible] se [illegible] his verbis: Dominus [illegible] (E lit. d. d. 27. Oct. 1604.) Sunt autem [illegible]

Doctissime Vir!

[illegible] ipso, Caesaredani Majestatem cupere de incognita Cygni quantum edoceris. Quem in finem undique testimonia et argumentum [illegible] Cum autem ex globo stellato ante te edito demonstrentur, [illegible] tibi anno 1600. integro anno ante, ultimam [illegible] Regiae memoriam, (nam ante Nov. anni 1601. non memini [illegible]), in mandatis accepi, uti ad te scriberem teque per amorem [illegible] solus mirabilis facis, adhortarer, certiorem ut redderem Caes. [illegible] tibi ab conactu, aliquando illum ab te non esse visum, an [illegible] modo quibusdam argumentis, conjecturis et fide tabularum [illegible] die, qua occasione primum cognosceres in eum incidisse. Id sive [illegible] sive literas primo quoque tempore ad ipsum C. Mtem [illegible] clementissimus ab te accipiet. Vale.

[illegible] 7. Febr. anno 1604.

T. Pr. ad officia paratus

Johannes Keplerus.

Clar. [illegible] Mathematicus.

[illegible] Da stella anni 1600. nemo plane ad me scripsit. [illegible] omnes a me suae admonitu, ut ego a [illegible] globo, qui [illegible] exercebat in [illegible]

♃ et canda ♀	22. 24½.	
" " Lanx bor.	22. 25.	
♃ ab. merid.	30. 41½.	♂ et [illegible]
28. Maj. h. 10. p. m.		
♃ et Arctur.	22. 12.	
" " canda ♀	22. [illegible]	
" " Spica.	6. 52½.	
5. Feb. h. 9 mat.		
♂ et canda ♀	8. [illegible]	
" " coll. ♀	24. 25½.	
" " ocr ♀	27. [illegible]	
23. Feb. h. 12 noct.		
♂ et Regulus	17. [illegible]	
" " coll. ♀	17. [illegible]	
" " canda ♀	9. 23.	
" " Spica	37. 27.	
" " Arctur.	[illegible]	
6. Apr. [illegible]		
♂ et Regulus	8. 42½.	
" " canda ♀	16. 57½.	
" " coll. "	16. 37.	

Keplerus, in cœli, quid de nulla Cygni [illegible] [illegible]num edit, stellam, adde duobus vesbis, [illegible] cognita, quæ jam in globos pro [illegible]

[illegible]

[illegible] dass keine Gelahrten sie [illegible], wolle ich mir unterdessen, [illegible] bei Würtemberg sterch gebraucht wird, und mir [illegible] zu verschaffen. Da ich die Bücher trag, so [illegible] mir, auf [illegible] Gelahrten [illegible] und [illegible] mir es viel mehr [illegible] [illegible] Dat. d. 24. Sept. 1602.)

[illegible] Magnifice et Nobilissime Vir, responsis Keplerus (7. Oct. 1602) [illegible] legato vestro. De Maestlino sollicitando commoda habes [illegible] quid insidiarum ipsum putas metuere, id ipsum ubi D. [illegible] caveris, ille et Maestlini securitati cautum esse intelliget et sup[illegible] responsum in M. T. gratiam nihilosecius exterquebit. — [illegible] ad hortandum Matthaeum ad scribendum elegans, Melchiorem Eutlin, [illegible] Constantinus Dorn Friderici Würtembergici, qui anno 1616, mortuus Friderico, [illegible] est.) —

[illegible] 12. Nov. 1602, ad Harvartum dato hoc [illegible] Keplerus: Maestlini [illegible] exspectto. Perennat stella jam annum vica. Quae cogitavi, ex observationibus Tychonis, qua parte descriptum earum habeo, nihil [illegible] inveni, nisi hanc levissimam conjecturam: d. 29. Jan. 1600. [illegible] est ad „lucidam" in pectore Cygni, atque statim [illegible] distantia simpliciter a „pectore Cygni". Ex [illegible] hanc [illegible] lucidia interna probatur exemplis [illegible] earum [illegible] Andromedae, lucida Hydrae, lucida capitis Leonis, [illegible] Ceti etc. Imo dum considero consensum distantiarum, reliquae [illegible] caudae Ceti et os Pegasi reponunt ☿ in 22° [illegible] bor. [illegible] locum et dant Ephemeridem intra 2°. At distantia ab hac [illegible] quasi esset illa in pectore Cygni, haberet lat. [illegible] 20° [illegible] reponeret ☿ longissime in septentrionem. [illegible] patet, quod observator erraverit in [illegible] debere [illegible] in epocha interiori illae quae habet lat. 19° 20° et [illegible] Hujus ergo distantia cum reliquis duabus in idem [illegible] [illegible] notae tanae, cum se sita [illegible] [illegible] 1602): D. [illegible]

[illegible]

Es wär jetzt, si unquam alias, Zeit und [illegible]

[illegible]

Was [illegible] die Edition [illegible] Tycho [illegible] gewärtig. (Comp. I, 191.)

Ich wünsch Euch gleichwohl [illegible] Ich wolle aber dabei wünschen, dass Ir die Sache [illegible] geschwiegen andere Sachen [illegible]

[illegible] Juli 1602.

Eadem, quae in, ubi Herr Rudolph [illegible]

[illegible] Ulm [illegible] vera, propinquam, observationem ob caliginem non [illegible] non accurate, deprehendi 47° 30′ ☵ — lat. hor. 54° 30′ [illegible] Cygni delineationem, ut videas, quem pectoris [illegible] quam videris stellam, dum non in centrum sed contrarie [illegible] circa h. 9½ p. m. (Delineationem hanc omisimus, quam [illegible] eadem fere est, quam Keplerus sub finem libelli addidit.)

[illegible] non exactiore, accuratiore observatione ad te scribere velim, ubi [illegible] D. Hevelichium illam stellam insolitam deprehendere potuisse, [illegible] tamen appello, quia in catalogo, ceteroquin diligentissimo, [illegible] ut solam, quoquo usque recensiri, fuit ut solam, ne tantum [illegible] Angl. D. M. Welsero ad me scribendo de Keplerianis [illegible] 1624.

[illegible] (tum temporis gymnasii Augustanis professor mathematicus, natus est [illegible] 1548, medicinam operam dedit in academia Basiliensi; Augustae vero, ubi [illegible] magna ad mortem — 1618 — degebat, praecipue ad mathematicam et [illegible] incumbebat. Commentatus est Proeli Sphaeram, Arithmeticam edidit, [illegible] anno 1609, P. Rami Institutiones principiis) hasce dedit Welsero:

[illegible] Dominus. Quod nuper me factorum [illegible] nova, [illegible] circa aliquam stellarum conspectum non [illegible] stellas Cygni conspicere volebam. Tandem itaque [illegible] Cygnum inspicere coepi et aranea non contemplari. [illegible] Cygni, quam antea videre non poteram, sed quod mirum [illegible] non apparuerat. Cumque antea contempsi, quam Alex. Picco [illegible] in superiorem partem pectoris posuerit, illa tandem [illegible] globus [illegible] Id vero deprehendo, inferiorem stellam, stellarum globis [illegible] Quod enim in figura Picci superiorem autem [illegible] Id factum incuria opificum eorum, qui in ligno vel metallo [illegible] esse non animadvertunt archetypo contrarium. Similia sunt [illegible] in [illegible], quae scalis subjunctis non congruunt. Itaque novam ideam Cygni ex [illegible] compositi, ex qua nihilominus apparet, stellam 3. magn. in sinistrae alae [illegible] remotam a stella in pectore Cygni ejusdem magn.: et idcirco id colligi [illegible] esse illa 2., quae in oculo ejusdem magnitudinis [illegible] Nunc vero deprehendi, non posse id fieri, quia stella in sinistrae [illegible] stella in pectore Cygni: id vero phaenomenon, quod nunc [illegible] Praeterea minor est distantia inter pectus Cygni et novam [illegible] inter pectus Cygni et stellam in sinistro alae figura. Sit itaque novum [illegible] tribui debet, et non stellae novae. [illegible] Deo in principio [illegible] mundi visus fuit: et Deum septimo die cessavit, et [illegible] novi quoque. Quodsi esset in loco Scriptura, in qua illa quando [illegible] longitudinem et latitudinem, sed [illegible] stellae, [illegible] stellae, cui ortus [illegible], quibus descripsit Plin. II, 25. [illegible] stella ibi [illegible] esse affirmari non potest, quamvis [illegible] stellae, quae visum nostrum fugiunt, praescriptae in via lactea, [illegible] Ex eventu autem id cognosci potuit. Nam si [illegible] in alium loci in alium; et penitus post tandem [illegible]. Vestrae [illegible]

Romae ipsius P. P. Pistorii, ex Musaeo apud 21. Jan. 1602.

T. E. Observantissimus.

G. Henisch. D.

[illegible] de [illegible], [illegible] quae ad [illegible] stella [illegible] (Ven. 1620.)

[illegible] stella in Serpentario [illegible] ab [illegible] Ab illa in Cygno [illegible]

Haec sunt, quae inter manuscripta Kepleri et [illegible] hendimus. Anno demum 1623. rediit ad illum Keplerus [illegible] professorem Tubingensem scripsit. Schickardus haec [illegible]

Item et hoc. Animadvertistine disparitionem novae [illegible] insigniter me oculi fallunt aut prorsus evanuit. Nam ego [illegible] quamvis diligentissime per conspicilla saepius quaesiverim [illegible] quem locum stella indicari posset, quod cum reliquis [illegible] includitur quasi caput morientis Christi vulgari [illegible]

Quae ad haec responderit Keplerus [illegible] epistola (d. d. 20. Jun. 1623): Ad proximas tuas [illegible] Domine Pastor plurimum colende, breviter hunc respondeo [illegible] quae hodieque me vexant, ut non plus otii superest.

[illegible], Cygni novam anno 1612. [illegible] et [illegible] ejus „Mundo Joviali", nusquam reperi. Videtur [illegible] vero mecum aliquo modo ludificasse et hoc [illegible] voluisse. Scio enim certissime et [illegible] superioribus tribus brumis, quibus [illegible]. Ita tamen ut vulgaribus conspicillis [illegible], ut propter [illegible] quibus jam totaliter disparuisse falso credebam) [illegible] vidi. [illegible]

Quibus brevi post addit Schickardus: [illegible]

JOANNIS KEPPLERI

Sac. Caes. Majest. Mathematici

STELLA TERTII HONORIS IN CYGNO,

anno MDC. fuit incognita, nondum extinguitur,

NARRATIO ASTRONOMICA.

AD ILLUSTREM ET GENEROSUM DN. DN.

[illegible]

[illegible]

[illegible] JOANNI FRIDERICO [illegible]

L. B. in Grünbühel et Strechaw, Domino [illegible] Styriae Provinciali Aulae Magistro [illegible] Austriae Styriae Moraviae [illegible] siliis Aulae Imperialis et Burggravio in [illegible] Maximiliani &c. Camerario, Domino [illegible]

Quartus hic annus est, Illustris et [illegible] ex que primum ad nos [illegible] pervenit. Erat tunc recens nova [illegible] Brahei, astronomiae instauratoris celebratissimi [illegible] hoc quoque reddebat acerbissimum, quod ab [illegible] supellex instrumentorum astronomicarum, [illegible] lerat, quadam inextricabili fato clausura et [illegible] tenebris.

Itaque cum eorum usus esset [illegible] paulo ante provisum erat mihi [illegible] divino quodam instinctu, quorum res [illegible] olim vergerent, [illegible] versato, partim [illegible] eventum prudentissimis verbis [illegible] et sententiis [illegible] Brahaeanorum conformatae [illegible] Brahae obortae, publicae [illegible] G. Tho. permisa [illegible]

[illegible] potius [illegible] quam ab illo, [illegible] Tychonis [illegible] libellus [illegible] Tuo Nomini [illegible] providentiae [illegible] vicissim et in Illustre [illegible] Nomen [illegible]

Quid [illegible] fuit, cur id quod erat destinatum intermitteretur? [illegible] satis probabilem afferre Tibi potero? Nimirum [illegible] novi phaenomeni; intereaque ad praecipuos mathematicos [illegible] ipsorum suffragia. [illegible] neque stella extinguebatur nec ea promtitudine responderunt [illegible] quam sperabam, tempus interea lapsum est; donec post [illegible] ingens illa nova stella, qua de hoc (praesenti) libello agit, effulsit [illegible] cujus miraculi magnitudo cum [illegible] aliquam [illegible] videretur, aequum videbatur, ut parva Cygni stella [illegible] confessae, sicuti claritate cedebat, superesset illi [illegible] etiam si primum de libro disputationisque capite [illegible] quid haberet peculiare cognituque dignum, ejus explicationis [illegible].

[illegible] hinc in medium [illegible] facta est [illegible] scriptio et [illegible] peculiari inscriptione a libro reliquo separata [illegible] tamen [illegible] vilior reddita, postquam jam aliquot annos [illegible] neque verbum [illegible] dictum revocari [illegible] multoque minus infectum [illegible] debet. [illegible] Illustris [illegible] arcana [illegible] significationem [illegible] tempore [illegible]

[illegible]

Atqui clara est haec stella, satis magna [illegible] tionis cum ceteris speciem evidenter variat [illegible] incredibile, non posse mentem industriam memoriam [illegible] quod attinet, candide agam, ut astronomus [illegible] ratur, viderim hanc stellam ante annum 1601; an non? [illegible] dendum erit. Nam etsi ab anno 1591. Mantuae memo[illegible] cere coepi, non memini tamen, moneri [illegible] Ptolemaeo unam in Cygni pectore. Abhinc [illegible] astronomicam, in Styria coelum sedulo [illegible] astrorum notitiam nec memini me plures [illegible] glabe. Saepe ubi venit, ut de nova [illegible] quaeret Cygnum digito monstrarem; nunquam [illegible] haeserat illa, quam hodie proxime pectore [illegible] mire pro certa mecum, non visam mihi [illegible] signorum zodiaci, praesertim eorum, quorum [illegible] sicuti Ursae, Cassiopeae, Boeti, Erithonii [illegible] et in beulae insuprente asterismo nevum [illegible] equidem ita impressas a multo tempore [illegible] idonea in mihi, ut discernere quisque [illegible] Cygne neque planetis illas [illegible] potui, cometae apparuere. Ophiuchi [illegible] 1600. tantum, dum eidem hanc [illegible] maici cum coelo ex praefatio hic [illegible] [illegible] 1598. [illegible] quam [illegible] [illegible] cum [illegible] [illegible] Cygnum [illegible]

[illegible] Ita hic a propria memoria, ut dixi, destitutus, nec [illegible] novam hanc esse stellam. [illegible] de [illegible] dixi, de omnibus fere professoribus mathematum hodiernis [illegible] sunt per academias Europae distributi, dicere possum: qui [illegible] nihil movent de novo phaenomeno, sententiam suam [illegible] aut se nescire fatentur. Maestlinus quidem confessus ambigere [illegible] tamen se, ut quo diutius suam examinet memoriam hoc magis [illegible] olim visam. At statim subjicit argumenta, quibus [illegible] antiquam facere; scilicet quod [illegible] tot annos [illegible] Ptolemaeus multas fixas omiserit. Hic ergo, dum ad argumenta [illegible] nihil se habere fatetur, quod e memoria sua contra nos depromat; [illegible] de Tychonis Brahei contubernio, in quo per viginti annos [illegible] vixerunt astronomiae studiosi, atque ii in contemplatione stellarum [illegible] adeo exerciti, ut quaedam hac potissimum de causa [illegible]. Adeone igitur ex superstitibus neminem esse, qui [illegible] phaenomeni, si ea falsa est, ex propria memoria [illegible] ista Bayerus, Omnium, ait, tacito consensu pro [illegible] posita.

[illegible] vero, quibus is, quem propria deserit memoria, fidem [illegible], haec sunt: Primum omissa est haec stella ab Hipparcho, [illegible] cum Deo improbum, annumerare posteris stellas [illegible] organis excogitatis, per quas singularum loca atque magnitudines [illegible] facile discerni posset ex eo, non modo an obirent (nota quoque [illegible]) nascerenturve, sed an omnino aliqua transirent moverenturve: [illegible] in haereditatem cunctis relicto [illegible] (Plinius lib. 2. cap. 26.) [illegible] consilio fixas descripsit, [illegible] an aliquae [illegible] vero juxta pectus Cygni omisit, cum in catalogo [illegible] in [illegible]: quid aliud agit, quam [illegible] in haereditatem [illegible]

[illegible]

Quae causa suffiere potuit diligentiam [illegible]
dinis stellam, tam vicinam illi quae est [illegible]
quartae tantum, sed quintae etiam et [illegible]
lunae quoque, si ad imaginis lineamenta [illegible]
ipse Gloris ceiliq non consecrunt omittendas
ad quartae designandam? Minime. Nam sufficiebat
Capricorni designandam, sed duas notant,
In capite Piscis austrini, in humero Sagittarii
ponunt. Denique singulas solitario sitas [illegible]
dum emiserit, si longe extra terminos [illegible]
tinia conjunctis, propter viam [illegible]
Itaque ob hoc ipsum, quia geniculae
nunquam minus prope fuissent [illegible]

Hic Maestlinus producit stellam,
Ungue majoris visitur, equitatorem seu
supra medio dorso sedet, quae etsi non
tamen est a Poeleusen et Hipparcho
nimium scilicet propinquitatem equitis hujus
magnum et clarum quo fit ut non
[illegible] Sunt quo hujus eminentia
[illegible] ad hanc Mevam, quae [illegible]
[illegible] ut rem [illegible] nihil
propinquam ab integritatem
[illegible] quam
figurationem. Major minus. Nam
[illegible]
[illegible]

[illegible] nubila [illegible], quae est in boreali genu [illegible], quae in australi genu est, porrigitur hanc densitate magis [illegible] usque ad Cephea &c. Et in explicatione alterius seu [illegible] quae duplicem facit lacteam: Inde, inquit, nimirum ab humero [illegible], haec, praeterquam quod tenuis seu rara est, confusiores etiam [illegible] limites, juxta partes antecedentes stellae in rostro Gallinae, adeo ut [illegible] interruptionis exhibeat. Reliqua ejus pars a rostro ad stellam in pectore [illegible] et latius explicata et bene densa est. Ac quae est in collo Gallinae, [illegible] densitae: vergit quidem particula aliqua, sed rara, ad aquilonem [illegible] pectoris *) usque ad stellam quae in humero alae dextrae et ad [illegible] in extremitate pedis dextri. A quo loco, ut prius dictum, hiatus [illegible] perfectus a dictis Gallinae stellis usque ad [illegible]

[illegible] incredibilem Ptolemaei diligentiam, quasi jam tum praevidisset [illegible]. Non sufficere namque Ptolemaeus est arbitratus, ut insignes [illegible], quae in viam lacteam incidunt, annotaret, quin et ut [illegible], ut ipse ait, ut margines illius [illegible] circuli stellis seu incidentibus in marginem seu [illegible] distantibus [illegible] mensura distantiae. Quod si ut hodie, sic jam tunc [illegible] lactea et quidem proxime marginem apparuisset, facile [illegible], ut Ptolemaeus illam omitteret? Nisi forte [illegible] viae varia spatia stellasque interceptas e globo potius quam e coelo [illegible] quod impossibile arguunt haec ipsa jam allegata verba.

[illegible] Tycho Brahe nostra tempestate veterem illam et admodum [illegible] curam, tot jam secula neglectam, [illegible] stellas omnes a veteribus notatas instrumentis [illegible] est earumque loca respectu zodiaci et [illegible] illum, dum singulas fixas, adeoque et pectus Cygni [illegible] vicinissimam, hanc novam tertiae magnitudinis [illegible] praetermisisset [illegible] vidisset? [illegible] mille [illegible] Tycho [illegible] Tycho in [illegible] [illegible] Ptolemaeum [illegible] manuscripto [illegible] non visam [illegible].

[illegible] Tychonis [illegible] nocte [illegible]

rerum siderum. Aquilae, Lyrae, cauda Cygni [illegible] caperet. Nusquam mihi occurrit mentio [illegible] pectore, clariores in pectore Cygni; simplex ubique [illegible] in pectore. At in discernendis duabus in cauda [illegible] diligenter adhibet notam a claritate majore vel [illegible] vel meridiei, ortus vel occasus usurpare et [illegible] genuinae fuisset in pectore aequalis propensio [illegible] totum confudisset neglecta distinctione: [illegible] vera pectoris, usum ad Ptolemaei aliquam [illegible]

Septimo, quoties evenit, ut, quia corpus [illegible] transitum harum stellarum per meridianum aequa[illegible] refractionum causa metiretur? At nullus commodius [illegible] vitandam porro ait superfluae stellae [illegible] fere claritate fulget cum vicinis, [illegible] igitur opportunitate loci, tam crebro [illegible] humili, cum Brahegni nullam superfluam stellam [illegible] Age vero, fidem aliquot superioribus [illegible] observationum libris, necessitate aliquot [illegible] pervolitanti obiter contremuit. Ubi [illegible] duabus plures videre est. (f)

Anno 1588, 18. Jan. Lucida sinistra alae [illegible] Cygni in sententiam Felix 18, 28. Valter [illegible] Hortum, 8 vero, capite et [illegible] et dictam [illegible] Cygni. Atque hoc negotium [illegible] Martii 8. [illegible]

	Declinatio.	Asc. Rect.	
		77° 56′	
Capitis Antinoi praebet	3° 38′		
Stella in colle Cygni distat a Lyra	16. 14.		Magn.
alae Cygni		66. 33½	
[illegible] quae sequitur Vulturem			
[illegible]	7. 30.		Magn. 6.
[illegible] in dextro pede Cygni		72. 42½	
[illegible] Cygni et Lyram			15° 22′
[illegible] Cygni		76. 24½	
[illegible] futuro Antinoi	1. 58.		Magn. 3.
[illegible] alae Cygni		82. 29.	
[illegible] informium orbis			
[illegible] Cygni		79. 24½	Magn. 5.
[illegible]		72. 48½	Magn. 3.
[illegible] sinistri Antinoi	2. 27.		Magn. 3.

[illegible] autem aderant 17 et 2 informes. Omisit ergo Brahe hac [illegible] 11, 17, quia ad meridianum applicabantur contortae. Et 17. [illegible] nebulosae, [illegible]: omisse igitur hac vice in majori occupatione [illegible]. De 7, 8, 9. causa omissionis itidem patet: primae enim [illegible] ignotae, et quando capta haec observatio, meridianum jam [illegible] et ipsae et rostrum: ut patet ex gloto, ubi lucida alae, quae [illegible], hac vice cubiunt post rostrum et post has tres, quae [illegible] alae adjunctae. Properea etiam in rostro, [illegible] meridianum observatores acceperunt declinationem [illegible] quae in medio est, ut [illegible] alae major est duobus reliquis [illegible] columnae, sita inter hanc et stellas pedis. [illegible] in pectore quae columnae alae antiquam pectoris atque [illegible] ubi tunc subjecta fuit, quotiam [illegible] observaverunt. Ea ipsa [illegible] [illegible] quae [illegible] 300° 46′. Sic et altitudine differt. Rostra enim [illegible]

quae Ptolemaeo perhibetur major quam [illegible]
igitur vides, non omissas circa Cygnum informes, [illegible]
praeteritae. Cur ergo haec omissa, si tunc [illegible]
sunt erant stellam superfluam tertii honoris [illegible]
pergamus. [illegible]

Eodem enim momento inter australiorem [illegible]
24° 47′. Additur: „Et haec videtur [illegible]
[illegible] Eodem: duae in boreo pede a Scheat [illegible]
genu et pede dextro observatae: ibidem [illegible]
mentio [illegible] Cygni, praecedens in dextro pede [illegible]
dextrae (inferiorem [illegible]) a Lyra et Scheat. Nov. 19. [illegible]
a Dracone. Dec. 17. Cauda Cygni a stella [illegible]
lucidam caudae Cygni observavit in septentrione [illegible]
promiscue ob refractionum inconstantiam. [illegible]
altitudines [illegible] Lyrae 4° 32′, pectoris Cygni [illegible]
caudae Cygni 9° 51′. [illegible] debuit et socia [illegible]
tude 2° 54′ circiter, si tunc fuisset. [illegible]
Lyra et cauda Cygni in septentrione. Aprilis 8. [illegible]
cum Bootis informes aliquas praeter Ptolemaeum [illegible]
illas optime includi posse genu dextro [illegible]
dicere potuissent, includi posse [illegible]
[illegible]

[illegible]

[illegible] satis lucide apparentem et lucentem, magnitudine [illegible] stellae [illegible] magnitudinis, cauda tamen vix apparebat. Videbantur tamen quasi radii [illegible] protendi versus zenith capitis quoad visum. Fuit autem caudae [illegible] caput Herculis, illo inferius versus occasum et septentrionem: distabat [illegible] in capite Herculis tribus diametris Solis ad summum quoad visum, id [illegible] fere gradu. Erat enim haec distantia notabiliter minor duarum [illegible] in corpore Vulturis distantia. At cur non dixit, fuisse hanc distantiam [illegible] aequalem spatio, quod est inter duas vicinas in corpore Cygni, [illegible] fuere? nam utrumque sidus aeque vicinum est Herculi. Pergit: [illegible] autem ea linea per cometam in proximam dictam, videlicet in caput [illegible] protendi (ubi producta esset) in eam, quae media est in corpore Cygni, [illegible]. Si duae tunc fuissent, discrevisset, quia addit, quoad visum. [illegible] Additur et pictura, ubi solitarie pingitur media in corpore, sed [illegible] apparet, quod humerum Ophiuchi sinistrum habuerit pro capite. [illegible] Nam cui stellae nomen dedit caput Herculis, haec linea ex pec[illegible] in se separat caput Ophiuchi ad unum latus parumper, caudam [illegible] alterum.

[illegible] igitur accedat his mutis testibus loquentium et viventium [illegible] eaque tanto valentior, quod, ut a principio dictum, nemmem [illegible] ex memoria sua ipsis contradicat. Primus est Gulielmus [illegible] qui hanc novam a se primum anno 1600. conspectam prom[illegible] in globum coelestem anno 1601. editum facta; de cujus [illegible] nihil est cur dubitem, testantur de ea occupationes nobiles [illegible] astronomicae, quod genus studiorum sic est comparatum, [illegible] nisi fidum et candidum: astrorum vero notitiam sum[illegible] [illegible] illud, quod Tychonis Brahei discipulus observationumque [illegible] tum. Ad quem postidum rumoris hujus originem sedire [illegible] maxime Caesare probante, literis ipsum interpellare de [illegible] quibus in primum hujus Novae stellae aspectum noctiamque [illegible] vero literis meis acciderit, ignoro: responsum quidem [illegible] [illegible] (v. 1. p. 165).

[illegible] ego novi est Justus Byrgius, S. C. Majest. astronomus [illegible] expert linguarum rerum tamen mathematicarum scientia [illegible] eximia professorem. Hanc superat [illegible] [illegible] potuerit, ut haberetur ut posterior astra [illegible] in hoc [illegible] non minorem quam Durerum in pictura, cujus [illegible] arbor aeva fama. Sed de [illegible] Byrgio noster [illegible] eadem de [illegible] non deprehendit initio, sed cum ex Hol[illegible] [illegible] Lipsia [illegible] [illegible] Novam in [illegible]

esset sculpturus, id subinde cum coelo conferretur, [illegible] praestitum. Globus ille perfectus, regium sane [illegible] liclmo transmissus est ad Caesarem Rudolphum, [illegible] Majestatis suae thesauris. Ejus similis alter [illegible] versabatur donatusque fuit paulo post Maximil[illegible] transeunti a Landgravio Mauricio. — Igitur Byrg[illegible] Olore pro Nova celebratam in memoria sua non [illegible] globum provocabat securissime: non vero [illegible] cujus diligentia tam certus erat, atramento [illegible] paulo post, ut a Landgravio vacationis [illegible] atque hic multorum admirandorum operum [illegible] globi a se facti reparationi curam impenderet [illegible] praeter Ptolemaicam antiquam spectandam [illegible] Byrgius de stellae hujus novitate confidentissime [illegible]

Addamne et tertium testem Joannem [illegible] Nam quod supra hunc inter eos retuli, qui [illegible] in sua Uranometria. Apertior multo fuit in [illegible] virum scriptis, quarum copia mihi facta est [illegible] vereor ne mihi irascatur auctor. Nihil enim [illegible] existimationem ipsius laedat, nihil quod [illegible] quod mihi illas quodammodo vindicare [illegible] Venerat ad Byrgium Cassellas [illegible] Gansneb dictus Tengnagel, Tychonis [illegible] Appellationum Consiliarius, adductus [illegible] ab astronomicis ministeriis erat; [illegible] [illegible] rem ad Davidem [illegible] genai peracrebrait eadem ad Joostelium [illegible] Joostelius ad me Pragam, ego in [illegible] Augustam, communicate, [illegible] Uranometriam, oculatissimam [illegible] manibus habere, quae et [illegible]

[illegible] quem ad proprium experientiam provocaverit, credo equidem [illegible] et praecipue meo ipsius permotus. Conscripseram enim paulo post rumorem propagatum ea, quorum [illegible] hujus Narrationis [illegible] et in Bavariam communicaveram [illegible] (comp. p. 755). [illegible] illum numeri arguunt, quos ex meo scripto in Uranometriam [illegible]. In eo scripto principio [illegible] quinque, [illegible] quorum:

[illegible] quaeque haeque sit haec stella, vetus an nova, constat rationibus [illegible] certo fuisse ipsam fixas altissime elevatam [illegible]. Quo deprehenso, [illegible] considerat, tot jam menses effluxisse, cum semper in [illegible] versatur, nunquam aequans vicinam in pectore, nunquam [illegible] ejus quae in rostro est attenuata, colore etiam constans et [illegible] equidem ubi mirum, si ipsa nova, quamvis per superiora argumenta [illegible], sollicitum tamen habeat, quid de ea futurum sit. Hac [illegible] dubitatione puto nonnihil territos fuerunt et de proprio exper[illegible] (ut vulgariter fieri solet multis [illegible] obloquentibus) [illegible] de ea in testimoniam adducenda destitisse. Quam etsi hic nudam [illegible] ut tantae solitaria, sed justa manu plurium testium freta: ut [illegible] fidem sustinere possit. [illegible] contestatam esse novitatem hujus stellae: nam si [illegible] fuisset, [illegible] credibile est ne totis quidem gentibus [illegible] Superest ut, quae in hac stella observavi instrumento [illegible] 1620. [illegible] primo serene adjuvante [illegible] in Bohemiam [illegible] Cygni [illegible] Cygni [illegible] Pegasi a pectore Cygni 35. 12½. [illegible] in rostro sextante defecerunt 1½', quae erunt in sequentibus [illegible] addenda. Nam distare invenimus

Vulture	29° 51'	correcte igitur	29° 52⅔'.
Lyra	19. 44.		19. 45⅙.
Humeri Pegasi	35. 50⅙		35. 52.

igitur fine anni 1600. in abaco Brahesano sit

[illegible] longitudo	26° 9'	♉	—	—	Latitudo	29° 21½'.	bor.
"	9. 48.	♉	—	—	"	61. 47½.	"
Pegasi "	23. 40⅙.	♓	—	—	"	31. 7⅓.	"

igitur ea forma argumentationis, cujus lib. I. Progym. [illegible] 111. et seqq. luculenta sunt exempla, prodit ex his meis [illegible] locus 18° 18' ♋, cum latitud. 55° 32' bor.[illegible]) [illegible] novitius observator vel instrumentum augustiam sit vel[illegible] tanto Brahesano sit observatum a studiosis a Brahe relictis.

[illegible]

cliente Tuo scriptam, instrumentorum [illegible]
tiinium promisisem, [illegible]
diuturnitate hujus Novæ stellæ in [illegible]
similem faciendo, [illegible]
ejus, qui creavit illam, tecum deliberem [illegible]
omnipotentem deorum, [illegible]
gnos [illegible] tentatum, [illegible]
stuporis, tantum [illegible]
novitate [illegible] habent. Quod [illegible]
ora, [illegible]
quoque [illegible] habent. [illegible]
[illegible]

PHAENOMENON SINGULARE

SEU

MERCURIUS IN SOLE

PROOEMIUM.

Paucis pagellis agit Keplerus in hoc libello de observatione maculae Solaris, quam falso censebat Mercurium in Solis disco apparentem. Errorem hunc agnoscens lectis Joannis Fabricii et Scheineri de maculis Solaribus libris et literis, ingenue eum fassus est, et passim in libris suis posterioribus literisque privatis ad hunc errorem se excusans rediit. In libello quidem hoc ipso, quem conscripsit anno 1608, de „maculis Solaribus" nondum egisse Keplerum per se patet, cum illae anno demum 1610. detectae fuerint. Quia vero Kepleri observatio propius attinet ad ipsas illas maculas, haud ab re putamus, ea, quae ad detectionem illam in Sole spectant, praefationis loco huic opusculo praemittere.

De hac quoque detectione sicut de detectis Jovis satellitibus coortae sunt lites, quibus Galilaeus, Fabricius, Scheinerus, alii se immiscuerunt; Keplerus vero non eodem quo prius modo in publicum prodit. Eam ob rem quae illas intactas reliquimus, haec tantum referentes, quae Keplerus de illis maculis per literas egit.

Primus qui Solis maculas conspectas publicis typis pronunciavit Joannes Fabricius, filius Davidis Fabricii, quem passim in hac editione memoratum frequentemque induximus. Libellum suum inscripsit: Narratio de macularum in Sole conspectis. Wittebergae. 1611. (Praefatio data est d. 18. Junii.) Eius dubio Joannes a patre ad siderum observationem instructus, Solis maculas detexerat, cum anno 1605. filius ad literas incumbebat, vacat praef.) et anno 1608. in literis ad Keplerum Wittebergae [illegible] ad professum astronomiae, annis forte sequentibus ad patrem [illegible] Oftenfelem (Ostelian) ibique in astronomicis se excolebat. [illegible] ad Keplerum [illegible] cum Keplero [illegible] anno 1608. [illegible] Keplerus [illegible] Prognostica [illegible]

Anno 1612. literas dedit Scheinerus Marco Wel
tricio Augustano, pluribus referens de maculis in Sole
omisso Scheineri nomine typis imprimendas
libellum his additis literis: Mitto, quas vide
quibus si sententiam, quod tuo commodo fiat, aperire
nopere devincies. De me tibi quaecunque in mea
rime omnia promitte, iis utere, abutere.
Deinde Julio mense anni sequentis haec ad
sime. Cum Galilaeus ad Apellis epist
Ed. Flor. Vol. III. p. 461.) et ad tuam sent
propius quam ad Apelle
exemplum mittendum existimavi. Videbi
opinionum dissensu modestissime cum adversa
aculeatum animadvertes, quae quo hodie inter
dubie pulchrior laus est; ego fiduciam veritatis in

Nomen „Apellis" quod attinet, nota
dam (d. d. 14. Apr. 1612.) subscrip
soli notus, aliis ignotus luceat;
latens sub tabulam, vel si mavis:

Perlectis igitur „Apellis" literis, quas
per Wackherum legenda

Illustris S. Caes. Majest.

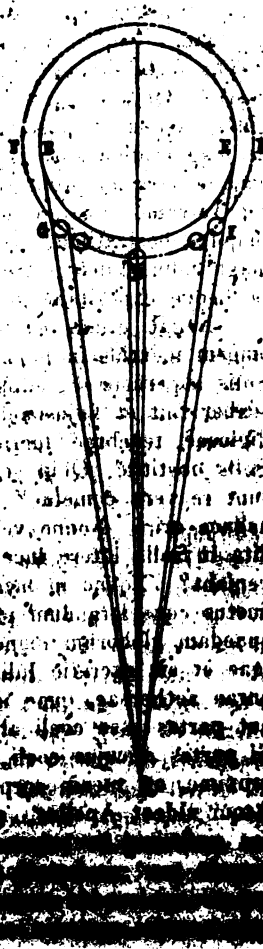
meum adspect
quotidie

cum illo disserere. Primum admoneo, videat ne quid nimis tribuat visui circa qualitatem et colorem macularum. Optica ratio docet, si Veneris [illegible] corpus in Sole fuerit, quantumvis ea luce luceret, qua penes nos [illegible] coeperibus circumscribit, tamen quicquid Venus occupat, id propter [illegible] fulgorem Solis meram umbram merumque nigrorem visum [illegible]. Non acquitur igitur ab eo quod accidit hic visui ad rem ipsam, maculas [illegible] latas esse nigriores re vera quam sunt maculae Lunae. Nullum igitur [illegible] debet hoc argumentum aut certe pertenue ad vindicandum ipsum [illegible] corpus ab his maculis. At illud validius est argumentum, non reverti [illegible] maculas, postquam corpus Solis absolverunt. Video absolvi discum [illegible] diebus circiter 12. Da ergo ut in hemisphaerio Solis averso morentur [illegible] 12, itaque post dies 24 iidem aspectus eaedemque maculae debe[illegible] redire: quod factum non est si credendum Apelli. Quindecim enim diebus longe aliae maculae successerunt eodem temporis spatio absolventes corpus Solis. Aut igitur series quaedam perpetua est corpusculorum inter [illegible] connexorum fere in modum catenae, quae paulatim inter nos et corpus Solis traducitur: aut si aliis argumentis probabitur, maculas has ipsi corpori Solis inesse, sequetur, illas nasci et interire rursumque veluti efflorescere, et in candenti ferro, quibus partibus ab humido aëre adspiratur: quod [illegible] minus minusque absurde dicetur, quo magis quotidie patescet [illegible] coelestium cum terrestribus cognatio. Nam etiam in Optica Astronomiae Parte capite VI. Solem comparavi candenti lapidi seu potius liquido metallo, ratione pellucidi et simul densitatis. Viam ait munitam ad [illegible] Veneris et Mercurii indagandos. Mercurius quidem paucis abhinc [illegible] semel atque iterum in clypeum Solis incurrere poterit circa primos [illegible] Geminorum et Sagittarii; at de Venere nihil habet haec astra quod [illegible] Cupiens Apelli nostro lectum meum „Phaenomenon singulare seu [illegible] in Sole." Illud vero maximopere mirum, aquilam illam Solis [illegible] ut Lunae. Ego hoc mane sane quam turbido instrumentum [illegible] cujus vitrum superius non amplius patebat capite acicular[illegible] [illegible] literam scribo eam jam hora abierit, quae non flamineo et [illegible] oculos incesserit urentissima, quamvis et caerulae [illegible] et vix unius nictus oculi spatio fulgorem Solis [illegible] [illegible] et blandi luminis stella, nec frequenter [illegible] [illegible], exhibaeque experior dextri oculi trepidationes. Val[illegible] [illegible] valius, ne meae penitus conligas oculos, aut si me [illegible] luminibus exstinctis tamquam [illegible] inter Apellem et me [illegible] oculos, magis meam mentem exhilararis. [illegible] declarata non deesse mutuo consilium, qui et conjunc[illegible] [illegible] consilio, sed non est firme judicio transi[illegible] [illegible] quaedam conjunctione Solis et Veneris [illegible] quae Magistro et Reinholdo, Reinholdeo et Copernico [illegible] Nam Ptolemaeus, quem [illegible] [illegible] Apellem conceditur serpentium [illegible] [illegible] Solem [illegible]

cunium sub Sole cernerent. Et tamen credulus [illegible] facillima opera expediret ab objectione falsa, [illegible] eas horum planetarum legesque, quibus in omni [illegible] Sole Venus plus diametro Solis ad latera expatiet[illegible] novatis hypothesibus in eam se conjecit necessitatem, [illegible] expressum ad unguem Ptolemaeum, non poslet tamen [illegible] quasdam corporales: ut videre est: 1579, 1587, 1595; sic 1578, 1586, 1594, 1602 Majo. Nihil igitur [illegible] hoc certum fecit, errare hisce diebus calculum Co[illegible] motibus: id vero unde eveniat, non constat; ex Ap[illegible] enim, Venerem sub Sole omnino collocatam esse, [illegible] possunt intervenire, cur illa hac vice in discum [illegible] si incurrerit, cur id eo tempore factum non sit, [illegible] de causa inspexit. Hoc equidem verum: si Apelles [illegible] prehendisset, actum futurum fuisse cum novatis [illegible] Atqui hoc Phoebus Apollo et quidquid est Decorum [illegible] exemplum pessimum, ut Venus unquem directa [illegible] ciatur, dederintque Apelli meliorem mentem [illegible] nibus, ut ille posthac malit alia omnia [illegible] directae cum Sole concubitam. Etsi video [illegible] capo systemate ominatum, sed cupiditate [illegible] mente locupletandi ad hanc observationem [illegible] et nihil ex necessitate inferentibus argumentis [illegible] postquam Galilaeus nobis jam ante [illegible] gradus cornutos ostendit? Aut si ratio [illegible] dubitet, Copernicum ab illa esse [illegible] explicatam, qui vel solum Rhetici [illegible] [illegible] ad [illegible] est, quis a nitida [illegible] Eustachii schola recte [illegible] megraphico mundanarumque [illegible] cuniculum circa Solis [illegible] figuram aspectu dequirent? [illegible]

Tertia epistola [illegible] Itaque, nisi [illegible] non tantis accurate [illegible] [illegible] coelo non [illegible]

[illegible] Apelles speraverit. Per parallaxin igitur nihil impedit quin isthaec [illegible] Solem obscurantia vel in regione Mercurii vel hunc inter et [illegible] circumeant. Ut igitur ejiciantur ex his regionibus Veneris et [illegible]rii, alia opus est argumentis, quae jam statim ipse nobis suppeditat [illegible]. Nam si credendum ipsius observatis, macularum istarum et motus [illegible]ntitas major est in medio Solis umbilico, quam circa ejus margines. [illegible] Apelles ipse vim argumenti, ut credat maculas istas circa Solem [illegible]. Si circa Solem, non igitur linea recta vel proxime recta per [illegible] Solis transeunt, quocunque illa loco sint, seu prope Solem seu in [illegible]ibus Veneris Mercuriique. Atqui curricula Veneris Mercuriique com[illegible] ad corpus Solis, et tantula portione, quam disco Solis obtendunt, [illegible]parantur rectis. Non sunt igitur isthaec curricula in regione Veneris [illegible]riique. Atqui, o Apelles, tanta vis est tuorum istorum argumentorum, [illegible] ipsum constringant induantque cassibus inexplicabilibus. Nam si circa [illegible] sunt hae velut insulae: quanto, putas, intervallo curriculum earum [illegible] necessit? Respice ad figuram tuam. Sit BE corpus Solis, R oculus, [illegible] curriculum macularum: duos ais menses fuisse [illegible] scilicet, ex quo non redeant maculae, [illegible] tamen a G in I diebus quindecim. Quodsi [illegible] eorum motus est, prodigium potius [illegible] videris quam partem aliquam naturae; [illegible] tamen sit, et omnes simul visas, et [illegible] abeuntibus successerunt constanti [illegible] 15, ut dicis, dierum circumire, de cetero [illegible] terri. Non cohaerere ista te puto videre, [illegible] igitur earum sit motus: si hoc, ergo, [illegible] 15 ab G in I motae, ex eo per duos [illegible] emanserunt: quod igitur restat IKFG, [illegible] quadruplo longius est quam GI. Quinta [illegible] curriculi eorum pars, puta GI, [illegible]. Atqui sexta circuli pars, aequa[illegible] [illegible], non exhibet portiones [illegible]; non potest igitur fieri, ut maculae [illegible] parvae apparuerint, in N [illegible] aut si sic apparuerunt, quod [illegible] non potest igitur fieri, ut [illegible] partiula ipsarum curriculi [illegible] omnino impedit aut impetito [illegible] requirunt: quod perinde [illegible] maculae [illegible] superficie [illegible]



strigmenta quaedam a Sole tanquam a [illegible]
leges mathematicas examinatis, jam porro [illegible]
impediverit. Ac primum mihi consentaneum est, [illegible]
macularum redeuntium, illas esse in ipsa Solis [illegible]
ab occasu sursum versus ortum indeque [illegible]
in occasum spatio 24 aut 26 circiter dierum. Cur [illegible]
videatur, mea de Marte Commentaria dicent Cap. [illegible]
rationibus probavi, Solis corpus, si convertitur, [illegible]
spatio semel converti. Addidi conjecturas, [illegible]
vel etiam unius diei angustiam redigitur. [illegible]
ceduntque jure optimo huic experientiae, [illegible]
Apelles mavult eas a superficie Solis separare [illegible]
absunt nubes nostrae a superficie Telluris, hoc [illegible]
quod mathematice contradicam: et sic [illegible]
ipsis etiam conjecturis meis de tridui [illegible]
argumentatio jam allegata ex Capite [illegible]
omni corpore, quod a Sole circa se [illegible]
circa suum axem converti. Celerius [illegible]
maculae. Nubes, ait, statui non posse [illegible]
corpus fortasse non continet intra sese [illegible]
nostra. Quid si igitur ut Tellus nostra [illegible]
gines exsudat ex sese, gignitque circa se [illegible]
de magnitudine vero Apelles esse [illegible]
eandem illarum proportionem statuere [illegible]
ad Terram, cum etiam in Luna [illegible]
majores nostratibus, sed simpliciter [illegible]
magnitudinem detrimenti luminis [illegible]
oculisque expositam comparationem [illegible]

Negat etiam esse cometas. [illegible]
omnem mentionem hujusmodi, [illegible]
Solis superficie discedimus. [illegible]
scaber fuit et hujusmodi [illegible]
digiosae tenebrae fuerunt [illegible]
Solis obstitit? Quid si, [illegible]
sunt re vera cometae? quippe [illegible]
heliace oriri. Nonne [illegible]
dies in Solis latere [illegible]
venisset? [illegible]

[illegible] lati superficiei inhaerentes. Tunc sane non negavere, et densa esse [illegible] et luci Solis non minimum officere; ut tamen nihil impediat, [illegible] per se tota luce sint pervia et veluti candentia eoque nomine [illegible] a Solis consortio. Dixi enim supra, quomodo haec stent juxta [illegible]. Agnoscit Apelles causas in quas incidit, fassus, non posse sole [illegible] defendi phaenomenon illud, quod maculae gracilescant in [illegible] Solis. Aliam igitur causam molitur, statuens corpora rotunda et [illegible] Veneris et Lunae illustrabilia a Sole. Rursum autem autor ego [illegible] ex ana ipsius redargue tabula; nec mirum, illa quippe fabrefacta [illegible] suae crepida. illuminatio, inquit, partem opacam ad nos immittit et [illegible] ambrosum grande facit. Non omnia, inquam, hoc facit illuminatio: non [illegible] ea, quae ambrosum undique ambit. Esto, sint corpora rotunda, [illegible] sub Sole. At quam diu sub disco Solis cinguntur a Solis illu- [illegible] quinta circularia extremitas ad nos porrigitur? Nec obstat, illam [illegible] versus Solis centrum latius in oculos nostros incurrere, corpore [illegible] Solis stante. Quantulum enim hoc est de corpore illustrato? [illegible] saltem de eo gradus iaque obliquissime sub puncti ratione [illegible] quantumcunque hoc sit a plaga versus centrum Solis, totam [illegible] plaga versus marginem iterum decedit. Simul enim margines jun- [illegible] illustrantis et illustrati; simul in puncto contactus desinit nostris [illegible] extremitas circularis illustrationis. Extra margines igitur [illegible] quod Apelles causatur. At extra discum Solis nunquam ullum [illegible] illi visum est. Nihil igitur ad rem intra discum Solis ea, [illegible] extra illum. Denique ut omnia sint concessa, margo tamen [illegible] illustratus si Soli opponatur, nihilominus umbram facit, quia [illegible] Solis fulgorem post tenuem suam lucidam opacitatis suae vi [illegible] quemadmodum et ab initio dictum.

[illegible] hoc seculo cuiquam sub Sole visum nullus dixerat, dies et [illegible] indicentur. Sectiones planorum sunt nisi fallor, circa 10° II. [illegible] habent ad 10° appensatiam in citima apside, quodsi [illegible] incidente a sectione, jam apparens latitudo est 45°; [illegible] anno 1601 erat conjunctio in [illegible] anno 65 in [illegible] anno 66 in [illegible] anno 67 in [illegible] aetate proxima, anno 69 rursum in [illegible] et sic [illegible] perdidit. In [illegible] Solem [illegible] Solis [illegible] sed vim illuminandi sole [illegible] Sol irradiet, ita, ut [illegible] nisi Sol in ea [illegible] centrum plaga [illegible]

Solis progrediantur, adhuc quaeritur. Tunc [illegible]
catae. V. Illustrari sic astra cetera res est a Galilaeo
in Venere. VI. Plures quatuor circa Jovem esse, [illegible]
negatioque. Diversis eos invehit circulis, res est certa
dies redeunt qui longius excurrunt. Haec vero [illegible]
distinguit a Solaribus maculis, quae uno motu [illegible]
austrumque inclinantur, ea in re Lunam nostram [illegible]
praeter ea, quae a Galilaeo habes, nihil [illegible]
tinet Apelles. Ultimo dubitat auctor, [illegible]
erratica. Moveri illa res indicat, si etiam Terra [illegible]
vertunt enim annuum Terrae circuitum. Si in Sol[illegible]
fixa dici possunt, ut fixum opponatur non mobi[illegible]
specie; idem, si in certo orbe affixa circa Solem [illegible]
tales credere vult erroneos nos inter et Solem [illegible]
qui Solem incurrant, hic a Sole longius [illegible]
menta; nam et inaequalis motus in disco Solis [illegible]

Concludo tamen cum ipso, ea quae [illegible]
quae ignoramus. Itaque et delectat veritas [illegible]
ipse meum Phaenomenon seu Mercurii [illegible]

Nihil igitur restat Illustrissime [illegible]
tabula proficias hucque importuno Sitori [illegible]

Hem tibi opportunissimo [illegible]
dum de Solis maculis [illegible]
medium legendi ambagiosa [illegible]

[illegible] optimo, quod habebam ex concessu Electoris Coloniensis p. m., [illegible] Solis excepi et papyrum in puncto concursus radiorum applicavi [illegible] vitro. Sed fulgor immensus radiorum collectorum et spe- [illegible] mihi obstiterunt, ut maculas nullas cernerem. Quare curam [illegible] maculas deposui. Assumsit autem eas quidam Fabricius Wite- [illegible] libellumque super hac re vulgavit mense Junio Anni 1611: quem [illegible] est Augustanus quidam Anonymus seu ficto nomine Apelles: quam [illegible] ego ad telescopium redii, ususque utroque vitro maculas tandem [illegible] detexi. Satis tamen diu me latuit, diducenda esse vitra paulo lon- [illegible] varia judicia prodierunt de his maculis; inter ceteras vero [illegible] discussio Galilaei, cujus copia mihi facta est hoc ipso die: non- [illegible] pervolvi. In summa motum seu δίνησιν Solis in suo spatio [illegible] satis clare ponunt ob oculos; et qualitate quidem eandem, quam [illegible] ante tradidi in Commentariis Martis, quantitate vero diversam, a [illegible] Illud quidem demonstratio mea requirebat, ut celerius [illegible] unam absolveret quam Mercurius, celerius igitur quam 88 die- [illegible] ita rem habere maculae testantur: diebus enim 14 ad summum [illegible] facie Solis apparente; totidem igitur etiam in latente. Igitur [illegible] 26 et 28 versatur una periodus. Sunt igitur reliquae meae con- [illegible] de triduo aut de unica die convolutionis hujus. Scripsi sub [illegible] anni 1611, quid de substantia macularum harum sentirem, et parum [illegible] ex posterioribus observationibus invenio. Nimirum non sunt [illegible] omnino celeritatis nec viam eclipticae parallelam incedunt. [illegible] haerent in superficie corporis Solaris, neque tamen abeunt ab [illegible] intervallo. Ex his argumentis et quia in ipsa facie Solis oriuntur [illegible] evanescunt aliae, densantur rarefiuntque passim, schematismos [illegible] sensibiliter, dum una alia celerior est, facile colligitur, tale quid [illegible] harum macularum, quale sunt in hujus Terrestris globi [illegible] et nebulae, motum nonnullum obtinentes in aëre, qui multis [illegible] gyratione Telluris superatur. An autem ex ignitissimo [illegible] exspirent atrae hae fuligines, Deus novit: [illegible] non tuto extendi potest. Maestlinus quidem [illegible] posse, corpus Solis non esse rotundum [illegible] fallaciis decipi, et causam vel in instrumento [illegible] inaequali claritate, de qua etiam Galilaeus monet. [illegible] cum una et altera constellatione ex catalogo mille fixarum [illegible]

sophicis contra Feselium. Accedit jam 1616 [illegible] Réalinum. Haec Francofurto possunt haberi.

Ptolemaeum Graeco-Latinum cum typis [illegible] prete Mercatore, si tolerabili pretio in Belgio [illegible] exemplaque ad D. Scillerium mittere Ratisbonam, [illegible] refundam. Venit hic raro, puto non infra 7 florenorum [illegible] nullam reperitur.

Haecce rogo Excell. D. Tua boni consulat. [illegible]

V. Ex. T. [illegible]

Quae Keplerum de Pitiscus et libris suis [illegible] ad Schillerum prioribus additas, in quibus [illegible] reliquis carere; avecem, quae sibi desunt, binâ [illegible] netur mihi rescribere D. T., quid dendat Dominus [illegible] fidendum sit longitudini et latitudini fixarum stellarum [illegible] et quas tanquam a Tychone observatas Franc. Pitiscus [illegible] gens Romae edidit. Opuscula eius sic [illegible] patum hic adjunga.

Keplerum de maculis Solaribus etiam cum M[illegible] ad Keplerum datis, in quibus respondit ad [illegible] De maculis in Sole, scribit Maestlinus, [illegible] facta est hactenus legendi copia, ut primi [illegible] latentia. Ego et mecum alii eandem [illegible] (v. st.) 1612 [illegible]

Miror, ut vere ita dicam, non quale in [illegible] videntur. Nam quod in maculis [illegible] etionibus aliquantae tamen portiones [illegible] dies magis magisque elevatae. Figuram [illegible] quidem formae, impari tamen [illegible] quantitate [illegible] 10. vel minus 14 par, [illegible] Sole velut signorum [illegible] observationes vidi aliquot horum macularum [illegible]

[illegible] et qui aliquando illi [illegible] Moravia, [illegible] hac [illegible] Certe multa in [illegible] de quibus [illegible] (E. Kepler d. d. 20/30. Julii 1613.)

[illegible] 17/27. Maj. 1613 responsoria ad Kepleri literas, quae [illegible] hanc referenda: Galilaei scriptum, quod Tubiae [illegible] Demonstrationes interno alle macchie solari &c.), epistolam Latinam [illegible] in ea et dicit omne tulerit punctum. Dolco autem, nihil [illegible] illum obtingere, quo vel unum, nedum omnes Jovis satellites [illegible] mecum perspicillorum Venerem cornicularem videre possem. [illegible] doctorum hallucinatione [illegible] solutio [illegible] tabulam. Quid [illegible] fictitum sit necnon; hactenus aliis incidentia obiicit. Age gratias observationem magis commodarum in Sole. Directo radio hactenus aliquoties [illegible] ejus nimia claritate observationem prohibuit. De eo Sole [illegible] autem, cum praesertim eminentiae et Maculae per diversa instrumenta [illegible] possem mihi obtingant pariter se habere. Num igitur vel vitri vel oculi [illegible] dubito. — Haec Maestlinus. In praefatione ad Ephemeridem a. 1617. [illegible] 776), hoc de Sole natali Keplerus Dathium Fabricium allocutus [illegible]

de omni cometarum aetherea, stellis novis, lactea via, [illegible] Jovis, de Luna terrea, Venere corniculata, de [illegible] altitudinis ambium metiendae ratione, de multa [illegible] Belgae musicoque ejusdem automate — et brevitatis causa [illegible] approbo; discrimen ei applaudo. Dum vero ait, esse [illegible] homines et animalia in Lunae globo degere, affirmari [illegible] autem potest, videri in ea homines quippe a Lynceis, [illegible] servi qui hoc affirmat, nec etiam ea usque se porrigit [illegible] hinc cogor suspicari, pertinetam esse Dissertationem Nuncio Sidereo (p. 497). Atqui non affirmasi, ea talia videre [illegible] ea, quae vidi majuscula esse, comparatia cum iis, quae hic [illegible] (nam quae propensa est aggerie Peloponnesiaci [illegible] Pelion montes?), audacia sumta ratiocinandi, quaesivi joci [illegible] occasionem, ut praedictorum impugnationem.

[illegible] in filio tuo [illegible] ante Apelliani vitrum, ej lacunis [illegible] ut testatus sum Pragae multis et testibus eiusmodi [illegible] supposita [illegible] perpetuo [illegible] volitantes [illegible] certe non [illegible] Ut [illegible] quae [illegible] ab [illegible] quibus [illegible] [illegible]

[illegible]

[illegible] Galileo [illegible]

si ego nescivi, ne Solis [illegible]

[illegible]

propria est [illegible] inventione [illegible]

[illegible] videre Mercurium [illegible]

[illegible] quam [illegible] 1617. [illegible]

[illegible] antiquo illo astronomo [illegible]

[illegible] fortuna [illegible] [illegible]

[illegible] Vidimus [illegible] Avenzoar [illegible]

[illegible] libro contra Theologiam [illegible]

deceptus Mercurium [illegible] Solem, [illegible]

[illegible] transcripsisset Copernicus [illegible]

transmittit exhibitaque Maestino [illegible]

[illegible] Commentationes [illegible]

[illegible] Et quid sit Virgilius antiquissimus [illegible]

[illegible]

[illegible] Solis [illegible]

[illegible] Sed [illegible] non [illegible]

[illegible]

Sic [illegible]

[illegible]

[illegible]

[illegible] fol. 94: „Dicam quia simplex, quidem [illegible] agnovi, quod ut nos crediamus maculam in Sole [illegible] obscuriorem, et nato et simplici [illegible] quam phantasia. Verum affuit deliberatio illa [illegible] omnibus alterationibus mutationibus [illegible] maculam illam fuisse Mercurium inter Solem et nos interjacere non minimo astronomorum ejus aetatis cum ludibrio. Quemadmodum [illegible] fuit illa, cujus mentio facta in Annalibus Francorum, impressis [illegible] Bibliotheca P. Pithoei I. C. anno 1588, ubi in Vita Caroli Magni [illegible] octo dies continuos visam a populo Francico maculam nigram in disco [illegible] ingressus et exitus observari non potuerit ob impedimentum nubium [illegible] fuit esse Mercurius tunc Soli conjunctus. Nimirum hic error est cum [illegible] Mercurium in Sole morari septem horas, ut fert ejus analogia motuum, [illegible] contigit illum inter Solem et nos intercurrere. Quare certum est [illegible] duo fuisse unam ex maculis magnitudine et obscuritate insignioribus, [illegible] quaeque possunt existere certis temporibus, et forte, si diligenter [illegible] inquirerimus, brevi talem aliquam deprehensam simus. Quodsi [illegible] Solarium inventum aliquot annis maturius habuissemus, Keplerus [illegible] hoc adinvenire potuisset interpretandi calculumque loctum hujus per mutationes temporum emendationes, de quibus hic diuribus agere non [illegible] sed certus autem sum auctorem illum ut verum philosophum et [illegible] ea opponere non solent: primum atque has meas observationes et [illegible] plenam mihi assensum praebituram.

Ita epistola fol. 112 eiusdem libri:

[illegible] a diversis sub Sole sit visus, id se dubitationem habet et [illegible] ut in praecedenti epistola scripsi. Ex quod ad Keplerum [illegible] quidem dubio, quin pro ingenii sagacitate, perspicacitate, [illegible] libertate et veritatis quam proprierum, opinionum amore, longe [illegible] perspicacissimum habeat, nigrorem illum in Sole visum [illegible] vero Mercurii esse [illegible] praeter [illegible]

tam magnum fuit. In ratio Urbis — Pragae — hoc [illegible] majus defuebat quasi a 30 pedum altitudine, aut [illegible] credo fuisse plurimas oblongas, quae causa fuit [illegible] parvae muscae) esset diluta instar rarae nubis, [illegible] schemata; omnia habebant istam maculam [illegible] clara: in iis nullam vidi maculam, quia [illegible] intersectio radiorum sufficiens. Schema [illegible] 14 pedes. In eo macula erat uno margine [illegible] recta, ex adversa plaga paulo dilutior, [illegible] pulcem. Foramen rotundum fuit quasi [illegible] d. Pragae d. 5. Apr. 1608. Comp. Opt. p. 60 [illegible]

Brenggerus respondit (Kaufbeurae 8. Cal. [illegible] [illegible] mihi fecisti, quod apparentiae Mercurii [illegible] Magni Ephemeridis conjunctionem illam integro die [illegible] [illegible] dicebant antecedere, quam ego observavi [illegible] qui [illegible] est, quantum abierunt [illegible] disciplinis. Sed qui factum sit, ut in posterioribus [illegible] altera parte obscurior et nigrior, altera dilutior [illegible] valeo; neque enim credo, stellam Mercurii [illegible] Hic obiter mihi occurrit mirandum, quod [illegible] nempe, fieri posse, ut [illegible] non de eclipsibus conjunctionis luminarium, sed [illegible] me semel deceptus fuerit: nam [illegible] posita, nec is modum observationis [illegible] differentiae longitudinis locorum, et [illegible]

Christopheri Heydii [illegible] [illegible] observationem quam in sole [illegible] [illegible]

Clarissimo Domino Doctori [illegible] Clarissime [illegible]

Cum praesentium exhibitor [illegible] [illegible] occasione et te scriberem. Pater [illegible]

[illegible] respondeat. Scit enim, quid meo interesit, et jam pridem [illegible] promisit mihi respondere.

[illegible] et per te hominem excitem, scribam aliquid, quod vel ipsum [illegible] te jam ante secula monitum ad scribendum excitet. Superiori [illegible] Maii vesperi duabus et tribus horis ante Solis occasum, cum nubes [illegible] erant, visus est nobis hic Pragae Mercurius in ipso disco Solis. [illegible] quidem ipsum non adspexi, sed schemata omnia, quae tenuis erant [illegible] magnitudinem habentia unius manus seu palmi, nubeculam exhibuerunt [illegible] nubecae inter imum et sinistrum margines, in $\frac{1}{4}$ vel $\frac{1}{5}$ [illegible] diametri. Ac schema unum quantitate dimidii thaleri ostendit Mercurium [illegible] nigrum, me hercule instar parvi et macri pulicis.

[illegible] refer D. P. Maestlino, et puer stet ante fores, non discessurus [illegible] ejus responso. Simul autem et nominatos ceterosque D. Pro[illegible] me officiose saluta. Tuam vero salutem cum D. Parente et [illegible] privatos parietes partire.

[illegible] 8/18. Junii 1607.

Excell. Tuae amicissimus

Jo. Kepplerus.

[illegible] dicit Keplerus „negotium ecliptico", spectare videtur monita, quibus varia ratione [illegible] 1604 ad forte etiam per Desalchum ad transmittendas eclipticas observationes [illegible] Hoc quidem monitum ad finem spectabat non perdidit Kepleri[illegible] [illegible] Maestlinus litteras dedit Keplero, quamquam non plane intactum [illegible] in Sole, quam Keplerus in Optica (p. 322) refert, dijudicaque hanc [illegible] de multifariis motuum planetarum in coelo apparentibus itineribus [illegible] Feb. 1608). Quam dijudicationem cum Keplerus in libello suo ipse refert, [illegible] subiecimus monemus, nisi ellum intuitus [illegible] Keplerii [illegible] quasi, ipsi Keplerus in sequenti libello. Neque vero [illegible] [illegible] Herwarti, quibus monet Keplerum de Mercurio in Sole [illegible]

[illegible] Et quod planetae occurrunt mihi duae observationes de lite habeas, [illegible]

jam ☌ ♃ ♂ in ♒ videre amplius non potui. [illegible] instaret mense Decembri ☌ ☉ ♂ in 17° ♐. [illegible] mense mane rursum videri potuit. Accesserit [illegible] quae mensem fortasse unum diutius justo Martem [illegible] pluvius inciderit, &c. [illegible]

Observatio Mercurii in Sole iis verbis est [illegible] non possim, nisi ab astronomo assignatum, ut [illegible] stantias corrupto textu falsas esse necesse sit. [illegible] Cal. legatur VI. Id. Nam intricatam falsas [illegible] plum, arguit vox „Francia“ pro „Nobis“ vel [illegible] in voce „Mercurii“ cum litera 6 [illegible] praebuit numeri 16. Sed *Cal.* pro *Id.* legi [illegible] lulum divaricata pingeretur. In sequentibus [illegible] fortasse barbare scripsit, ut multoties, [illegible] horis. Nam 16. Cal. vel 6. Id. Aprilis [illegible]

Oportet illum secum ipso consentire [illegible] tot eclipsibus annotatis, et quod [illegible] scivit, ex quocunque calculo, qui Mercurii [illegible] 807. facit 3 sexag. vel 6 sign.

Cur autem veram credam [illegible] si ex centro ☉ per interceptionem [illegible] medio Sol) ducatur recta, quod [illegible] ergo [illegible] ☍ ☉ ☿ [illegible] mihi facere velit.

[illegible]

andern unwiderleglichen probationibus, so ich, wann ich es gewüst hette, gar gern überschickhen haben wölte.

Dabei aber wölt ich gern in etwas expostuliren, oder doch den Herrn stimuliren, weil Er ohnnal diess παραδοξοτατον wahr sein befunden, warum Er nit auch der andern traditioni de Venere per Mercurium eclipsata gedenkt, vel potius, uti verba sonant, quod summi dignitatis instar habituri fuerat, Luciferum in coelo non comparuisse, idque anno a. Ch. IV. Er wäre wohl freund anzuhören, quod Mercurius possit obumbrare particulam Solis, et non nullis magis stellam Veneris. So ist die observatio Mercurii sub Sole allein a privato homine [illegible], was aber de Venere tradiert worden, das hat ganz Rom (damalen, wie es in summo [illegible] gewesen und coeli observationes publice in usu gewesen) pro maximo extento et pro[illegible] gehalten. Das hab ich allein ex curiositate den Herrn erinnern wellen.

[illegible] bestehenen angenehmen Dienst und auch alles Liebs und guets zu erweysen [illegible]

Datum München d. 5. Jun. 1609.

J. G. Herwart.

Libellum Lipsiae imprimendum curavit J. Tanckius, cui Keplerus d. 12. Maji 1608 (vorg. I, p. 375) haec dat: Libellos meos excude ut vis. In praefatione Phaenomeni singularis: „Veneris et Mercurii" scripsi, debui „Solis et Mercurii" ponere. Mitte pagellas successive.

Nec ita expedite processisse typographum apparet ex hac Tanckii responsione die 28. Nov. data ad literas Kepleri deperditas, quae modo praemissae proxime subsecutae sunt. Salutem et amicam officiolaque promtissima. Tardius ad Tuas, Vir Clarissime et [illegible] respondeo. Aegerrime nempe tuli, quod a Typographo delusus fui hactenus, [illegible] promisit, se editionem libelli tui instituturum. Sed quid fit? Excusat se, quod jam [illegible] Μίτεμφον. Sed mitto hominem et de typographis, [illegible] pronuntiare possum, quod [illegible] Scaliger: „nullam nationem esse his mendacioresq." Junior Grönius editionem brevi [illegible]: typi vel figurae sunt in ligno incisae et omnia in prontu, modo typographus manum [illegible] admoveat. Sed nunc brevi admovebit. Ferendum igitur quod nec tu nec ego mutare [illegible]

[illegible] transit Tanckius ad „Physiologico-Medica", ad Kepleri quaestiones respondens, [illegible] his Tanckii verbis concludendum est: Ventriculum oliis comparas. — In eo a te non [illegible], quod de epate affirmas, probant id scripti hydropicorum: dissentio vero a te in eo, [illegible] totaliter. Carbones non subministrat, pedus suis radiis frigidis aestum ventriculi [illegible]. Magnetibam vim agnosco in ventriculo putrefactionis chyli ratione, qui est [illegible] vero quatenus lien radios suos mittit ad ventriculum calidos: nisi forte frigidos [illegible] ratio. . . . Quae de structura affirmas ventriculi, illa non contra me sed pro [illegible] propter ventriculum, non propter putrefactionem chyli vel coctionem dic. [illegible] mendacium, quod ad te mitto; vasis liquefacies et in aquam resolvas.

[illegible] 11. Apr. 1609. haec dat Tanckius Keplero: Clar. Vir, amice honorande. [illegible] discessit bibliopola, quod promissioni non steterit. Spatium fecit in excipiendis [illegible]. Propediem [illegible] in typographeio Balthasis (ad lib. de Cometa anni 1607) [illegible] de salvavi apud me donec repetereo. Historiae [illegible] nunc apud nos si [illegible], Interim me excusatum habebis, voluptatem agnosco pro facilitate. Si [illegible], jam aliquoties animus fuit, suntus facere ex proprio mirandis typographicis. [illegible], verum esse illud Domini Scaligeri: „nullam nationem mendacioryem esse typographis." Sed valeas. Te autem Tanckium tuum amare non desinas. [illegible] Kepleri. Accipies types quatuor: totum hoc inventum magnum et tres [illegible] demonstravi ex tuo opere.

[illegible]

[illegible]

JOANNIS KEPPLERI

Sae Cae Mtis Mathematici

PHAENOMENON SINGULARE

SEU

MERCURIUS IN SOLE.

CUM DIGRESSIONE

DE CAUSA, QUA DIONYSIUS ABBAS CHRISTIANOS MINUS JUSTO A NATIVITATE CHRISTI DOMINI NUMERARE DOCUERIT:

DE CAPITE ANNI ECCLESIASTICI.

ILLUSTRISSIMO PRINCIPI ET DOMINO

D. JOANNI FRIDERICO,

Duci Wirtembergiae et Teccae, Comiti Montispeligardi, Domino in Haidenheim,
Domino meo Clementissimo,

Illustrissime Princeps, Domine clementissime. Cum nuper illustrissimus Princeps et Dominus, D. Fridericus Dux Wirtembergiae etc., Illustrissimae Celsitudinis Tuae parens laudatissimae memoriae, irrevocabili decreto Regis Regum et Domini dominantium ex hac vita esset evocatus, acerbissimus, ut par erat, dolor animum meum occupavit. Perpendebam enim adeptam, quae patriae meae parentem, quae sub ejus tutela per hos quatuordecim annos aurea pace per omnes ordines fruebatur; occurrebant laudatissimae Principis curae, quas in exornanda excolendaque provincia non raro felici successu indefessus impenderat; versabam animo ingentem ejus amorem, quo subditos complectebatur tenuisque plebeculae commoda adjuvare salutemque tueri studebat; nec parum movebar patrocinio et beneficentia, qua literas artesque liberales adeoque et secretiores constanter asseruerat; laudabam juxta fraudis [illegible] et [illegible] publicam perniciem comparatarum vindicem [illegible] contra [illegible] asseclarum ludibria invictum; ut non dicam de singulari [illegible] et prudentia ejus in educatione liberorum Illustrissimorum adhibita, ut [illegible] consilii publici auctorem, si casus tulisset, hominum locorumque [illegible] instructissimum.

[illegible] sit igitur et tanta bona, cum hac Heroe exstincta, animum meum [illegible] et gemitus decidentem excepit et retinuit recordatio certi [illegible] Illustrissimae nimirum Celsitudinis Tuae, jucundissima: ut qui sub disciplina [illegible] ad maturam aetatem provectus, non nisi ad insignem [illegible] peritiam profecerit. Accessit fama, quam per [illegible] Romani nec paucas alias Europae provincias, quacunque [illegible] optimam; quaeque [illegible] tibi laetissimis [illegible] et in publica habita [illegible] [illegible] [illegible]

quaque se mirifice fuisse affectos affirmabant, [illegible] que literis conceptam in publicum emittèrem.

Illis ego dum non gravatim obsecundo, commodum [illegible] eum libellum mihi esset agendum, qui mihi negaverat [illegible] curium sub Solem incurrere. Qui libellus cum ante biennium [illegible] fratribusque Ludovico et Julio esset ab auctore dedicatus; [illegible] eundem arbitrum deferretur mea defensio, cui erat oblata [illegible] Illa Cto Ta de quaestione mota rectissime judicaret: nihil [illegible] dum videbatur, quam ut hoc quidquid est commentationum [illegible] dedicarem, eidemque de hac felici successione in [illegible] juxta gratularer, faustissima omnia precatus. [illegible] nificatione et Principi fidem subjectionemque et patriae [illegible] tatum facerem.

Has igitur chartulas Illae Ci Tae sic offero, ut [illegible] me meosque offeram et commendem, [illegible] ralitate et beneficentia Ludovici praedecessoris [illegible] jussu et sumtibus Rudolphi II. Imperatoris nostri [illegible] inter ceteras Reipub. partes sic in clientela [illegible] pleoq pergat, ut quae ornamentum pacis [illegible] cessorum de his arduis judiciis approbatu [illegible] sua esse voluerunt, et publice de [illegible] nubit votaque implebit, quae meorum [illegible] C. Tae me subjectissime commendo. [illegible] anniae aerae 1608. [illegible]

Illustri Cel. Tae [illegible]

MERCURIUS IN SOLE.

In Astronomiae parte Optica sub finem capitis VIII. ubi de occultationibus siderum inter se mutuo ago, exstant haec verba:

Mercurii nodi in Tauri et Scorpionis principio, vel Arietis et Librae fine [illegible] (Excessum in signo vide paulo infra), possuntque hodie ac fere omnibus temporibus planetam hunc sub Solem invehere. Quo minus mirandum, quod in vita Caroli Magni legimus ad annum 807. annotatum his verbis: „Stella Mercurii 16. Cal. Aprilis visa est in Sole quasi parva macula nigra: tamen paulo superius medio centro ejusdem sideris, quae octoties (ut ego lego [illegible] non octo dies) a nobis ita conspecta est. Sed quando primum [illegible] vel exiit, nubibus impedientibus non potuit adnotari." Auctor astronomiae peritus fuit, quod apparet ex consignatione tot eclipsium et quod [illegible] Solis et Mercurii calculo tenuit, ex quo scivit maculam illam esse [illegible]. Annus tamen nescio quo casu vitiose conscriptus est. Fuit [illegible] annus 808. XVI. Cal. Aprilis (forte quod annum a Paschate inchoat) [illegible] diei meridiana hora in Regiomonte calculus Prutenicus exhibet [illegible] 0° 45′ ♈, Mercurii 0° 31′ cum lat. 2° 9′, quam latitudinem a Ptolemaeo certum est sic ordinatam, ne hos duos planetas sub [illegible]. At jam dictum est, hodie nodum in Arietis (vide infra) [illegible], ut non praeter rationem sit, tunc fuisse circa initium hujus signi. [illegible] non amplius soli Averroi de hoc Phaenomeno credimus, post[illegible] professionis homo, [illegible] quoque calculum addit. Haec [illegible]

[illegible] post editionem Opticorum prodiit disputatio de inaequalitatibus [illegible] praeside M. Michaele Maestlino, Professore Mathe[illegible] respondente M. Samuele Hafenreffero, quae in libello [illegible] velitationes cum sententia non paucis [illegible] per [illegible] (disputata et jacta est) etiam [illegible] conjunctionem Solis et Mercurii [illegible]

pro eo, quod legitur octo dies, legendum dixerunt [illegible] Haec responsio vera est. Nam si hoc ita spectatum est [illegible] uno die: non est igitur spectatum per 7, 8 vel 9 [illegible] disputator, non omnes auctores habere octo dies, ut [illegible] efformet illud octoties, nam apud Eginardum esse dies [illegible] dies 9.

Respondeo, certum esse unum aliquem primum [illegible] hanc visionem Solis: ceteros ab hoc descripsisse. Fuisse [illegible] descriptio ipsa indicat: Maculam parvam in Sole [illegible] nisi astronomus, rari et insoliti phaenomeni [illegible] in Solem dirigat videatque maculam parvam in [illegible] esset? Quando ne illum quidem [illegible] Lunae vident omnes, etsi Luna nulli [illegible] potest.

Reliqua argumenta, quibus [illegible] operae pretium est ex epistola mea cognoscere [illegible] ad praedictum juvenem, [illegible]

ab veteri [illegible] auctore vitae Caroli Magni, qui Monachus [illegible] perhibetur Engolismensis Coenobii (nomen [illegible]) [illegible] exque scriptore vitae Ludovici Pii descriptas; praesertim illos, qui de rebus astronomicis, ut de cometis, eclipsibus et similibus tradunt [illegible] rhapsodi posteriores omiserint vocem Mercurii, dicentes tantum de macula nigra (forte ignorantes, esse aliquam in coelo stellam, quae dicitur Mercurii): tamen certum est, fuisse aliquem priorem illis tempore, [illegible], qui hanc ipsam apparitionem referret ad stellam Mercurii? [illegible] antiquior ratione subnixa non est convellenda per auctorum [illegible], negligentiae aut imperitiae manifestissimam et praeterea [illegible] remotiorem.

At instat disputator amplius: videri Eginardum fuisse spectatorem [illegible] quippe qui Caroli Magni [illegible] fuerit et epistolarum magister et denique gener. Ego vero recoquo vim responsionis, Eginardus [illegible] narrationem a scriptore vitae Caroli descriptam. Neque quis? [illegible] explicet, qui credam verisimile esse, duos diversos [illegible] phaenomenon in Sole aequalibus octo dierum spatio [illegible]? Quin potius illum primum auctorem credimus, qui se [illegible] probat fuisse astronomum; alterum vero Eginardum illius fuisse [illegible] quod descripsit ipse non intellexit; [illegible] post memoriam [illegible] auctor fuit ad corruptam [illegible] narrationem [illegible] Caroli Magni, [illegible] conatus est auctoritate Eginardi persuadere [illegible] mortem Caroli Magni. [illegible]

778. ponerent, eundemque annum Lycosthenis in [illegible] captum permutatione characterum. [illegible]

Quod vero Lycosthenes et cum illo ego [illegible] ponit, cum ceteri Franciscorum rerum scriptores [illegible] dissensio non est, sed pulcherrimus consensus [illegible] et doctrina temporum. Nam in eo cardo vertitur [illegible] annum vel a Paschate incipiat vel a 25. Martii [illegible] cum illum a Cal. Januarii praecedentis incipiat [illegible] Cal. April. ab Annalibus refertur in [illegible] me ab initium anni 808. Sequitur igitur hujus [illegible]

Digressio de Epochis annorum [illegible]

Annum a scriptore annalium a Paschate [illegible] reperimus in Opticis, nec paulo evidentius [illegible] Scaliger editione secunda libri de Emendatione [illegible] relictis iis, quae auctor suis rationibus [illegible] solis illis, quae is ex antiquitatis monumentis [illegible] colligere, annum ecclesiasticum inchoare [illegible] minum, quippe festi mobilis [illegible] de suggestu. Itaque in testimonio Bedae [illegible] Christi politico secundum [illegible] [illegible] 665 [illegible] a Paschate [illegible] scriptio [illegible]

Quod vero Beda annum 701 [illegible]

[illegible]

736. VII. Jan. [illegible]

[illegible]

[illegible] sed etiam Pascha stepius statuebat ante aequinoctium [illegible] ethnicum tempore Constantini committebant Judæi, ex [illegible] Constantini de Paschate et ex aliis Epiphanii locis. [illegible] VIII. Cal. Aprilis Christum quidem resurrexisse, quidem [illegible] esse et sic Pascha ultimum Christi ex die indidisse [illegible] quandam Pascha fixum hoc die 25. Martii Galli celebrarunt [illegible] post tempora concilii Nicæni. Eodem die VIII. Cal. Aprilis [illegible] in Ecclesia Matris, hæserunt vel ex Chryscostomo vel ex Be[illegible] Eodem die et mundum conditum esse opinati sunt [illegible] Palæstinæ a Theophilo congregati; ut lignet ex [illegible] apostoli, quæ est apud Bedam, et ex Epiphanio. Itaque VIII. Cal. [illegible] dictus fuit spatiosus, ut refert Scaliger præfatione in [illegible] Cum itaque 25. Martii ab occidentalibus pro principio die fuerit [illegible] dum successorem scriptorem Annalium Gallicum ex [illegible] quum? Vel certe ex ea die Paschatis mobilis, quod ex [illegible] diem indicere solet.

[illegible] habent argumentum ipsi anni Incarnationis seu [illegible] usque et scriptor Gallus est ipse. Sed [illegible] ab Dionysio patabantur genuine notione veri, ab [illegible] Conceptione Christi, posteriora vero decepta putarit [illegible] annos a Nativitate Christi; nisi enim a Nativitate [illegible] Christus natus esset anno Juliano 46. Decembris, Anno itaque [illegible] præcedenti Septembri finiebatur 15. Tiberii Christus [illegible] annum 29, quod constitutum videbatur Evangelistæ, qui [illegible] Christum anno 15. Tiberii inchoasse annum 30. Hinc [illegible] Dionysio posteriores annos Dionysianos, quos [illegible] interpretatione, numeraverint a Nativitate, et sic Dionysii [illegible] æquiparent cum D. Joan. Evangelistæ, [illegible] 30 [illegible] 3 Julii, completis intellectis. Hoc [illegible] ut di, qui [illegible] Christi inchoarunt ab VIII. Cal. [illegible] [illegible] ab VIII. Cal. [illegible] [illegible] Christum [illegible] [illegible] Christi. [illegible] 25. [illegible] Cal. [illegible]

[illegible]

[illegible] ante ortam esse illam traditionem, quod Joannes annunciatus fuerit die 24. Septembris. Dissimularunt enim dissensum numeri 30 in Evangelista qui hoc deprehenderunt, aut forte de eo non cogitarunt.

[illegible] igitur erant Dionysio argumenta a patribus accepta inquirendi [illegible] conceptionis Joannis. Quodsi itaque Joannes annunciatus est Juliano [illegible] Septembri, Christus annunciatus et conceptus fuerit anno sequente 46. 25. Martii. Is vero est primus aerae hodiernae, quam nos a Nativitate [illegible] vulgo putamus. Itaque scriptores Gallici, qui Dionysium dextre [illegible], cum numerent annum Incarnationis Dionysianum 807, incipiunt [illegible] a die Incarnationis, a 25. Martii eo, sive propter viciniam a [illegible], et terminant eundem in 24. Martii post initium anni politici [illegible], quem nos hodie prava intellectione aerae Dionysianae numeramus [illegible], et a Nativitate, ideoque etiam a die Nativitatis, seu potius ob [illegible] initii politici Romani a die circumcisionis. Recte igitur ista conjunctio Solis et Mercurii, quae 17. Martii contigit, reponitur et a scriptore Gallo in finem anni 807. et a nobis in primum quadrantem anni 808. [illegible]

[illegible] sum praeter mentem in chronologicas, ostensa causa, cur [illegible] Christi mutilatos habeamus opera Dionysii, cum veteres ecclesiae [illegible] biennio maturiorem exhibeant Christi nativitatem, quam est [illegible] aerae vulgaris. Id feci tanto libentius, quod ante biennium [illegible] Diatribe Chronologica de anno Natalitio Christi, causam, quae [illegible] nostri numeri conditorem seduxerit, dicere non potui. *)

[illegible] igitur et hoc obiter, invidiam [illegible] dicto meo libello auctoribus [illegible] sum accusatus eo, quod pro Evangelistae numero 30 [illegible] nos ponimus 32 vel 33, [illegible] rotundum Evangelistae [illegible] adjectionem particulae [illegible] quasi vel circiter. At qui [illegible] Nimirum ii, qui Dionysianam hodie [illegible]; itaque eodem crimine quod in nobis accusant et ipsi [illegible] nec Evangelistae numerum [illegible] mutilarunt, et pro 30 [illegible] enim Christus est natus anno Juliano 45. 25. Decembris, [illegible] 72. 26. Decembris [illegible] 15. Tiberii, quod est extra [illegible] Decembris 25. Christus comple[illegible]

[illegible]

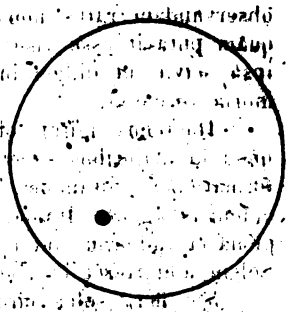
veteri scriptori Annalium obtingere potuisse, [illegible] feceratis, fidem narratae ab illo historiae [illegible] gaudebitis.

Scripseram superius allegatam epistolam [illegible] Testis est mihi disputator. Sequenti igitur [illegible] fuit 18/28. Maii, anni mei observationum [illegible] ad verbum exscribam.

„Cum praecedens vespera diei Solis [illegible] et una ventum, nox vero partem [illegible] pluvia, videremus autem nullum aspectum [illegible] nisi conjunctionem Solis et Mercurii, [illegible] 19/29. sequenti: coepi cogitare, [illegible] fuerique vespera diei 17/27. Et [illegible] fuit, studiosum a Brahee relictum, [illegible] inspexeret: nam constare mihi ex [illegible] curri esse in Geminorum et Sagittarii [illegible] scriptam semestri ante.) Igitur etsi [illegible] tamen cum post meridiem [illegible] [illegible] et [illegible] et simplum, [illegible] magnitudinem [illegible]

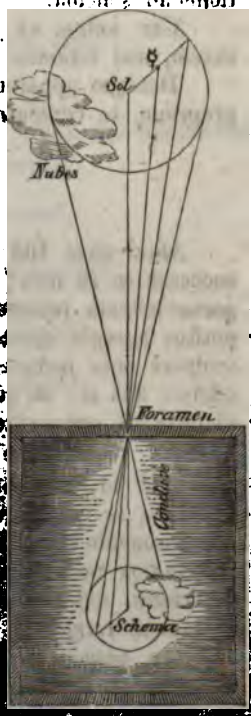
cap. II.) [illegible]

diametro nonae, vel decimae partis unius pollicis adhibimus spatio circiter 14 pedum a foramine, quod schema exoravit ad praesentem magnitudinem. Vidimus ab inferiori et sinistra schematis parte (ubi ad schema converso) parvum punctum, [illegible] pigredinis versus centrum; dilatius et minus [illegible] versus marginem, magnitudine et specie [illegible] pulicis; hoc clare, hoc semel: aberat [illegible] diametri parte plus minus ab extremo et [illegible] margine. Et ne quis existimet maculam [illegible] papyri, motata papyro transposuimus schema; [illegible] macula cum schemate incidit. Cum nubes super Solem ingruerent, [illegible] maculam etiam schematis, eodem loco schematis haerentem quasi [illegible], nubium species ingruebat. Testis est Justi Byrgii minister [illegible], qui spectator fuit.



[illegible] Schwarzer Fleck, wie Sonst.[1])

[illegible] habuerunt, tandem et Byrgius ipse cupidissimus visendi hujus spectaculi, sed jam nubes densissimae circa horizontem occupaverant Solem [illegible]. Cumque diu attentis tandem momento temporis dehiscerent, [illegible] quidem nos reliqui celeriter conspeximus quippe jam assueti, Byrgius vero, quem festum esse percupiebam, ipse festinatio praeceps et rubrum [illegible] nubium hiatus impedivit, ut quamvis stylo monstratam maculam a [illegible] nubium circumstantium discernere non posset. Sole enim motu nubes [illegible] vero quiete internoscebatur. At in tam [illegible] temporis momento motus nubium non potuit [illegible] expectari. Itaque phaenomenum quidem testis [illegible], ut concentiunt in nostrorum testimonio [illegible] est incertum.



[illegible] Solis secundum diametrum aeternum transitu [illegible], quem speculatorem in dies quatuor [illegible], rogitans, num quid vidisset oculis in [illegible] directis? Nihil, inquiebat, se quod certi [illegible] affirmare. Spectasse quidem circa [illegible] in extremo [illegible] [illegible] quod et in radio [illegible]

observandam ratus non valde, curavit [illegible] quam putavit esse visus defectum; neque [illegible] ipsa scivit, ut diligentius circumspiceret [illegible] moria retineret.

Hactenus igitur observatio. Adde [illegible] quod in majoribus schematibus diluta fuit [illegible] formationem foraminis, per quod Sol [illegible] oblongas agunt. Itaque latitudo quidem [illegible] plenaria radiorum intersectio, longitudo [illegible] Solem admitteret et loco maculae superfunderet [illegible]

Sic fieri solet circa globos, quibus [illegible] umbra eorum tam longe defluit in [illegible] majori spectetur angulo quam globus, [illegible] dilutas esse, avertunt enim interiores [illegible] interim marginalibus disci Solis radiis [illegible] hac vice contigit occasione longitudinis [illegible] schemate parvo, ubi rotundam et [illegible]

Deinde non est existimandum [illegible] respectu Solis, quam fuit macula [illegible] demonstratam, addendam esse [illegible] umbrae, auferendam et [illegible] tantur justa. Et quia nigredo [illegible] plenaria ibi facta fuit intersectio [illegible] in comparatione ad discum Solis [illegible] tione ad schema. [illegible]

Cur autem ex altera parte [illegible] nescio, nisi foramen in [illegible]

Denique apparet ex hac observatione [illegible] propinquam, in comparatione ad [illegible]

Quid nunc tibi [illegible] in re mea? [illegible]

ditos esse, sic ego pro laetitia moererem tibi meum potius epigrammate prodam? Nam quid tibi ego dicam? Cum 28. Maji spectaculum hoc essem nactus, sequenti 30. Maji Helena Maria, filia Illustris Viri D. Joannis Matthaei Wackherii a Wackenfels Equitis aurati, Rudolpho II. Romanorum Imperatori a consiliis aulicis, virgunculam, quae mensem decimum annum egressa latinae linguae artisque liberalium cognitione et exercitio rarissimis, aetatis nostrae exemplis comparanda, matronali prudentia, pene supra aetatem omnibus miraculo fuit, eximium Germaniae decus Iunae variolis extinguitur; cujus puellae virtutem animique dotes cum acerbissime dolerem extinctas, cum patris Patroni mei optimi matrisque Beneficentissimae, tum aliis ejusdem causa, illae ut potui immortalitati consecrari, laetitiaeque illius et moeroris hujus contrarios affectus eadem mentis agitatione permiscens, cum neque spectaculum meum dignieri allegoria, neque fatum crudelissimum domus amicissimae honestiori emblemate exornare possem, haec inter cetera sum meditatus epigrammata.

In persona Helenae defunctae.

Credideras tota periisse ex aethere sidus
Majugenae, in radius se quia conferat.
Sol negat ebaitens: Solem quis rara negare
Arguerit? Solis cuncta vident oculi.
Cecidit aperit lacrymas, clypeo ea tibi sidus in ipso
Luminis, ignarus quod modo perdideras.
Sol Deus est, Hesnes ego, lumen, gloria, vitae
Coelitis, humanis me eripiens oculis.
Si Deus est, justus, post mortem sit altera vita:
Justitiae alii subdita non geren.

Spectaculum astronomis pulcherrimum, paulo post occubiturum,

[illegible]

[illegible]

Cyllenes proles ipsa es, sub [illegible]
Undique Phœbeum circumamicta [illegible]
Sat fuerat, lethi communi foedare [illegible]
Invidet hoc etiam mors preparata [illegible]
Occidis ante horam. Non tanta est [illegible]
Pœna, Navis, Phœnix, umbra [illegible]

Age vero, exponar en propositum [illegible]
Hæc studia potestis juvare [illegible]
[illegible] societatem laborum [illegible]
[illegible] nostrum dictavit [illegible]
Quid si enim planus Apollinis [illegible]
carmine suo prœcinebat; [illegible]
Nectebat laureas non [illegible]
Postridie dubia [illegible]
Classis honorandae [illegible]
Utopina, coetus me [illegible]
Siste pedem, juvenis, [illegible]
Insignis mentem luminans [illegible]
Qua tenebræ spatiantur [illegible]
Et [illegible]
Majaqueum amplexus [illegible]
Auriconus medio [illegible]
Spectaculum [illegible]
At [illegible]
O [illegible]
Serta [illegible]
[illegible]
Audent? Hic [illegible]
Tempore venisti: [illegible]
[illegible]
Ergo [illegible]
Hoc animus [illegible]
Adsuge [illegible]

IN LIBROS DE STELLIS IN SERPENTARIO ET CYGNO, DE MERCURIO IN SOLE VISO

NOTAE EDITORIS.

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1) p. 616. Quos hic Keplerus tumultus bellicos tangit, his explicandi sunt. Sub finem seculi decimi sexti bellum contra Turcas vario Marte gestum est. Turcae expugnaverunt oppida munitissima Arrabonam (Raab 1594) et Agriam (Erlau, 1596), quorum illud anno 1598 recuperatum est. Annis 1600—1602 tempus terebatur pertractandis pacis conditionibus, excursionibus et levioribus proeliis, conatibusque frustra captis recuperandorum oppidorum Canischa et [illegible] &c. Anno 1595 princeps Transsilvaniae Sigismundus Bathori Transsilvaniam Imperatori concesserat, paulo post autem ex Silesia, quo se receperat, in patriam reversus novas movebat turbas, donec anno 1602 plane possessione cessit (Comp. I, 328). Anno 1604 eques ille Hungaricus Stephanus Botschkai civibus ad arma contra Germanos vocatis Transsilvaniam et Hungariam superiorem expugnavit, a Turcis adjutus agros late igne ferroque devastantibus. Rudolphus II. vero dubius et his regno suo illatis calamitatibus consternatus et diu cunctatus, tandem „ad vehementem instantiam procerum regni" (d. 23. Maj. 1606) licentiam dedit pactionem cum Botschkaio ineundi.

Quod Keplerus Rudolphum Hungariae pacificatorem praedicat, nemo crimini vertet Imperatoris mathematico. Ceterum constat, Rudolphum pactionem, quam Archidux Matthias cum Botschkaio (23. Jun. 1606) iniit, ratam habere recusavisse.

2) p. 617. Quos hic spectat Keplerus viros, sunt Joannes Krabbius [illegible], Helisaeus Roeslinus medicus, et David Herlitius, item medicus, [illegible] astrologorum digna [illegible] parum [illegible], quod Keplerus [illegible] [illegible].

[illegible]

Krabbius conscripsit libellum de nova stella [illegible] den 8. Tag Octobris am Himmel erschienen, sampt desselben [illegible] Erffordt. 1604.

Quamquam Keplerus hic et aliis hujus libri locis minimi [illegible] indignum habuit illum, quem de observationibus quibusdam [illegible] Mss. Petropolitanis duae Krabbii ad Keplerum datae epistolae, (d. [illegible] 1610) in quibus respondit ad hujus litera nunc deperditas. Quo [illegible] Kepleri objurgationes, ex his Krabbii verbis elucebit: Was [illegible] die Ich wieder den Herrn eingeführt, wegen dess er mich in [illegible] de stella nova [illegible] so gefährlich angegriffen hat [illegible] meiner Ehren und guten Namens gethan, und obwohl [illegible] gethanen Schmähen wirdhalte, dass er als ein Philo[illegible] der Parallaxi hat umstossen wollen, in Widerlegung seiner [illegible] mir nicht gefrevelt, sondern recht daran gethan hat [illegible] keine Ursach gehabt, mich wegen der Entschuldigung [illegible] Betrüger, der die Leute verführen thue, auszuruffen, und [illegible] rührigen Wortten verschonet haben, sintemal an der Bedrieg[illegible] noch ungewiss ist. Hette er aber einen Mangel in meinen [illegible] er mir alleine privatim schriftlich fürgehalten, [illegible] gethan, gerne haben weisen lassen. Dieweil ich [illegible] Herrn guten geneigten Willen, den er zu mir [illegible] dieumals. Alles von mir verziehen, vergeben [illegible] es wendte sich der Herr auff einandergal [illegible] und anfangs finden, dass ich in der Kunst [illegible]

Allein wie ferner anlangt den [illegible] kann es wol seyn, und [illegible] wahr werden, [illegible] der Herr oder Ich in der Observation [illegible] dass endlich die Warheit [illegible] kome. Wer recht oder [illegible] geobservirt [illegible]

Anhangende den Narrn [illegible] so [illegible] ist erschienen, und dass Ich dann [illegible] so gebe Ich hierauff zur Antwort, [illegible] dieweil meinen [illegible] der wahren Mittagslinie [illegible] selbsten nicht [illegible] dann auch [illegible] meinem [illegible] dreyen Wochen in dem Observiren [illegible] sondern ist also [illegible] dass zum [illegible]

Antonium Maginium dimisit ejusque opera [illegible] Vol. I, p. 277.

Eodem quo Magini, tempore conclamatis Ephemeridibus [illegible] Decides Origanus, quem dimisit Vol. I, p. 658, Cyprianus Leowitius (v. p. pag. 422), Martinus Everartus Brugensis, medicus et mathematicus, quem mortuum [illegible] Fabricius in literis ad Keplerum datis d. 11. Aug. 1603.

Denique occurrit in literis Keplerii privatis et scriptis publicis nomen Francisci Gemnach Bongnagelii (comp. Vol. I. p. 284, 342, 370, II. p. 84, 432), qui in Dania Tycho[illegible] praesto fuisset in observandis sideribus eumque Pragam discedentem comitatus est. Hinc, anno 1601, sive etiamnum Tychonis filium ejus Elisabetham duxit uxorem, illinque mortuo [illegible] Tycho Rudolphinas, suscepit nec non custodiam manuscriptorum instrumentorumque astronomicorum Tychonis. Parum vero instructus ad illud negotium detentaque ab laboribus (totum fere se dedit rebus publicis) rem inchoatam reliquit Keplero, quemquam hoc modo injecit impedimenta, de quibus plura habebis in praefatione ad Gemnagelii [illegible]. Observationes siderum vero dum Pragae versabatur solito more et ne instrumenta Tychonis plane intacta jacerent continuabat, et a Brunowskio facta monitus inter primos Magni novam stellam conspexit, quam conspectam nuncias Keplero his literis: Clarissimo Domino Keplero. Quoniam nova stella eximiae magnitudinis hiem diebus comparere coepit, quamquam [illegible] intermittere, quoniam frustra te domi tuae quaesivi, quin propere ad nos advola. Octavo [illegible] nemine, etiam. Nam quin illico post lectionem hujus habidas [illegible] sis, [illegible] indubito. Raptim [illegible]. Tuus F. G. Gengnagel. Keplerus [illegible] Hervarto, (1605) [illegible] „Catholicum factum esse, et praeterea confirmatum in officio appellationum [illegible]." Postea operam navavit Leopoldo, Austriae Archidici Episcopo Passaviensi, ejusque [illegible] ut [illegible] anno 1610. [illegible] „Passaviensis" promoveretur, sed Ringum [illegible]. Qui quum se recipientes (Martio 1611) improvise opprehensi fuerint a Gabr. Khuesky, [illegible] in carcerem conjecti ab imperatorem [illegible] majestatis, [illegible] pestem, [illegible] Hispaniae vicinus liberatus est. (Comp. Hurter, Gesch. Kaiser Ferdinand II. Vol. VI.). Spectasse hoc videtur Romae, anno 1611. (Romae, 17. Dec.) [illegible] Keplero, „magno dolore audivi Tengnagelii adversam fortunam." Ingeniosiore [illegible] matrem in gratiam receptus est Tengnagelius a successore Matthia, Viennaque [illegible] Romam.

6) p. 627. Muhamedes Albumasar (c. m. sec. IX.) et Alchabitius (sec. XIII.), [illegible] astrologorum princeps. Superstant illius (Abu Mashar al Balki; [illegible] de magnis conjunctionibus et generum revolutionibus, „Flores Astrologiae", [illegible] in astrologiam (lat. ed. Venet. 1516) [illegible] ad [illegible] [illegible] publicavit Vol. Nobel, Ord. 1566. [illegible] Vol. 1491, [illegible] (Wolfiani [illegible] hinc.) [illegible] Keplero, Alfragranus (Ahmed Ben Okbir, Tengnagelii [illegible] [illegible] Zac. [illegible], Frankf. 1669, [illegible] Gelius Aegyptl. 1669.

[illegible]

7) p. 632. Aristoteles de Generatione et Corruptione [illegible] de Coelo et Meteorologia. Compara cum his Vol. I, p. [illegible]

8) p. 639. Henricus de Hassia vel de Langenstein, Langenstenii, celeber theologus prius Parisiis, posthac Vienna[illegible] mortem (1397), (P. Ramus refert, Henr. de Hassia [illegible] Viennam transtulisse. Schol. Math. lib. II.) praeter philologiam [illegible] astronomica, (quaestionem de Cometa 1368, tractatum [illegible] 1380), neque vero nobis contigit, ut tractatum hujus [illegible] quid scripsit) inspiceremus. Quae Thiungerus de magnete [illegible] Petri Peregrini Maricurtensis, de magnete seu [illegible] 1558. Achilles P. Gasserus, hasce de doctore [illegible] vinculis non habeo quod certo affirmare [illegible] Si [illegible] dixerim, nec neque absurda protulisse, neque [illegible] Gilbertus hasce de illo prodit opusculum [illegible] amplius abhinc annis, satis pro tempore eruditum, [illegible] Gassendus ephemeridem dimidiatae existimat: [illegible] tione a polis coeli et coelo ipso quaerentur. [illegible]

Keplerus primum accuratius inspexisse videtur [illegible] autem, alterum eodem testatur parum integrum, longe [illegible] d. 10. Martii 1598. hunc pervenisse ad Keplerum. Ita [illegible] litteis mihi gar hoch, Imo zu grundigen, ich und mein [illegible] ersten nemlich magnete illica von dem pole [illegible] longitude et latitude sit cognita, auf die lieben [illegible] etwas Ursachen zu Gemüth hab, [illegible] wartens d. 12. Martii: Du neu nuntios scripsi [illegible] libello, dal nido de navigar, ubi [illegible] ciatur (pilotis vocant) Hispanus, et [illegible] cumber, acum nauticam magnete illicere [illegible] fabri ad argentaria vel potiunam, quod [illegible] si id esset, et hac ratione ad optatos portus [illegible] nis alias legimus.

Ita [illegible] Keplerus [illegible] ad quod (heu heu!) [illegible]

rei elementis quasi ex summo subest), discrepare magnetes non eodem omnis vergere. Summa, si nihil in hoc puncto respiciamus, honestissima mihi esset excusatio, quam temeraria responsione mihi inutilem reddo. Etenim, cum annum 26. vix egressus sim, mathesim vero non maturius, quam ab anno 94. serio sim adortus et pluribus annis tempus in prognosticis, vanissimo labore sed necessario, consumserim hactenus; intelliges, quam ego non sim lectione historicorum ad arduas hujusmodi quaestiones instructus.

Inde transit Keplerus ad Prodromum (v. Vol. I, p. 62) et sub finem addit: Ex Landsbergio (trigonometria) computari declinationem magnetis exempli causa, eo quod ex selectione tuarum literarum intellexi, gratum tibi hoc futurum. Apponam autem exhibitum cum demonstratione, quia in calculo minus sum versatus, ut judicium de eo quod demonstratis ferre possis sicubi errassem. Sane nulla mea huic labori utilitas est proposita, cum sciam, rectius haec a versatis in arte peti, quorum non paucorum habes notitiam. Quidquid igitur hujus facio, non alio quam gratitudinis studio facio.

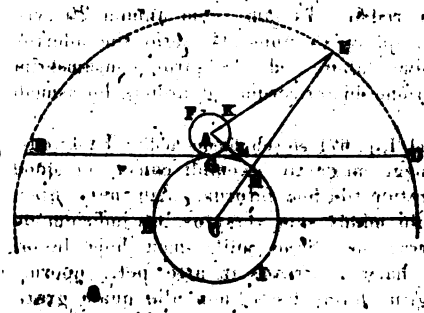
Mineates in tabula septentrionis ut et in altera bisecti Terrarum orbis designant poli magnetis long. 178°, lat. 16° 30′ a polo arctico. Idem in tabula Germaniae et in omnibus generalibus Monachium refert sub long. 33° 48′, lat. 69°.

In hoc autem negotio necesse est ad errorem vitandum Mercatorem nos sequi, quem Apianus et Item in longitudine novere possit. Haec si vere ita habent, dicit △ PML, cognitorum duorum laterum LP, MP et angulo ab iis comprehensio. Est enim L locus, P polus, M magnetis punctum, LP complementum latitudinis, sc. 12°, PM = 16° 30′ ex tabula geographica, LM autem ita quaerendus: subtrahendo long. loci a long. magnetis poli, 178° — 33° 48′ = 144° 12′ angulus LPM. Quaeritur LPM, quae est declinatio magnetis a linea meridiana.

Quadrantem itaque LP in F, et demittatur ex M perpendicularis MF, quae in △ PFM angulus F rectus est, ∠ FPM est angulo LPM aequalis, eidem ad duos rectos, sc. 35° 48′; latus vero PM datum est. Possunt itaque investigari latera FM, FP, quibus habitis dabitur △ MFL, cognitis lateribus MF, FL et investigari potest angulus LMF.

Primum operatur pro latere FM. Radius [illegible] latus PM [illegible] 10° 30′, [illegible] ∠ FPM = 35° 48′, [illegible] 5868[illegible] [illegible] 1601970, [illegible] 35° 48′, qui est [illegible] FM [illegible] pro latere FP. Angulus FPM = 35° 48′, complem. 54° 12′, [illegible] PM = 16° 30′, [illegible] L, et [illegible] 9[illegible] [illegible] 10[illegible] [illegible] 10[illegible] [illegible] 35° 24′ [illegible] LP = 35° 24′, [illegible] 7[illegible] [illegible] 20[illegible] [illegible]

anuum a linea horizontali spectaturam dingulam [illegible]



secundum altitudinem poli hujus loci, fore ut globus [illegible] conversatetur atque sic motus perpetuus [illegible] engegimento. Idem alio modo ex [illegible] confici existimat. Et si circulus [illegible] habens nidoquestus [illegible] vero LK trahens [illegible] clavum g fumum [illegible] fumum h, deinde, i [illegible]

circulum [illegible] quoque [illegible] potui alternatibus [illegible] colpradissima [illegible] Mönchii dictum [illegible] legato, compendiatissimo sed [illegible] audivi, quamvis id [illegible] et [illegible] [illegible]

[illegible] und ad navigationem Joh. Hugonis a Lieschone (?) Hagae adnectirt, so ich vermeine, der Herr werde es gern sehen. Ich kann zwar primo hoc [illegible] nit recht daraus kommen; will des Herrn Bedenken und Judicium darüber gern vernehmen."

Eodem quo Herwartus haec scripsit Keplero die is ad Herwartum sic: S. P. et felicissima anni auspicia.

Quia tabellarius admonuit, de more nonnihil literarum ad Excell. Tuam [illegible] volui.

Remisi nuper sine literis Clavii Theodosium, quem pro Epistolis Tychonis miseras. Eum quin receperis non dubito, cum id affirmet tabellarius. Clavii Astrolabium quo minus remittam, facit itinerum foeditas et spes brevi fore meliora, [illegible] periculo mitti possit.

Libellum hunc, cujus in scheda titulum vides (Pet. Maricurtensis de Magnete seu rota perpetuo motu. Liber est Maximiliano I. Imperatori dedicatus. Prodiit Augustae in quarto) commendavit mihi quidam principis fodinarum Illyricarum procurator Adjutus, secretioris philosophiae perstudiosus. Itaque te oro, ut Augustae de eo inquiras.

Quem librum quum Herwartus Keplero tradere non potuerit („ich kann den Maricurtensem noch von Frankfurt nit bekommen") prius ab illo ipsi transmissum librum („ein Instruction de Magnete") adiit Keplerus, eoque lecto haec scripsit Herwarto:

„Instructionem de magnete avide perlegi, sed incertior factus quam prius. [illegible] est instructio, tota experimentis constat, nec certa et constans est inclinatio [illegible]. Nam animadverti duos in ea meridianos magneticos: alterum per Azores, alterum per caput Bonae Spei. Quamvis merito auctoritatem auctoris in dubium [illegible]. Etenim in eodem capitis Bonae Spei meridiano, qui fere et promontorium [illegible] extremae Norwegiae amplectitur, Hollandis animadversa est non exigua [illegible] horaria inclinatio. Deinde cuperem scire modum, quo solent metiri [illegible]. Ad exactam enim inclinationem opus est exactissima cognitione [illegible], quidem pauci ex astronomis constituere possunt. Nautae vero [illegible] horologiis solaribus judicium faciant, adeoque ne quidem Hollandis [illegible], nisi ipsorum declinatio esset valde notabilis et magna, ut par est in [illegible] quidem in terram ascendebant metiendi causa, quod [illegible]

gari, quanta Tubingae sit declinatio magnetis. „Ego [illegible] hendo, nisi me *χειροτονησις* fallit. Vas quadratum ex[illegible] lineam meridianam applicatum aqua repleatur usque [illegible] ventis vel sub tecto. In hanc aquam immittatur acus [illegible] ne mergatur. Illa ubi quieverit, supra in labro vasis [illegible] sic ut respondeat ad oculum situi acus (oportet autem [illegible] parietes appellat). Et sumantur variae acus, si forte inter [illegible] Ego ex Batavorum observationibus colligo, locum Terrae, [illegible] in principio mundi fuisse polum Terrae, hodie distare a polo, [illegible] vult Mercator, sed 6½°. Hoc enim sequitur ex [illegible] consentit cum traditione Mariae, qui Copernici praeceptor [illegible] omnia loca Italiae mutasse suas elevationes et in eandem [illegible] quam mihi ex hac speculatione monstrat magnes [illegible] secundum illius rationes annis 5600 motus polorum [illegible] magnes 6½° discessit. Ratio, quia polus non directe [illegible] primo et magnetico meridiano conficit suum motum. [illegible] minor appareat, quam re vera est motus ille. —

9) p. 640. Messehalah, Messahalach, [illegible] initium sec. IX. scripsit „de scientia motus orbis [illegible] annorum mundi; de significatione planetarum in [illegible]

10) p. 641. Centiloquium Ptolemaei, [illegible] (v. [illegible] falsuliter tributum, continet 100 aphorismos [illegible] mittas 119 conjunctiones. In his [illegible] generationis et corruptionis." (Secundum [illegible] maei Basileae 1541.)

11) p. 642. Spectat hic Keplerus Ptolemaei [illegible] quorum librum III. ab Hervarto [illegible] partes explevit continuoque commentario [illegible] monicorum. Quod quibus modis [illegible] Inter hic commentarius manuscriptus [illegible] [illegible] locis aliter (v. s. p. 506) [illegible]

12) p. 643. [illegible]

ad angulum rectum (latitudo ♃ = 53′) et angulus illi oppositus (complementum anguli 50° 46′ 30″). Ergo

$$\text{sinus lateris angulo recto oppositi} = \frac{\text{sin. } 53'}{\text{sin. } 50^\circ\ 46'\ 30''} = \text{sin. } 1^\circ\ 8'\ 25''$$

$$\text{sinus lateris tertii} \quad . \quad . \quad . \quad . \quad . \quad = \text{tg. } 53' \times \text{cot. } 50^\circ\ 46'\ 30'' = \text{sin. } 42'\ 16''.$$

Ad 1° 8′ 25″ addita dist. ♄ et ♃ 1° 32′, prodit arcus circuli verticalis = 2° 40′ 25″. Jam in triangulo item rectangulo dato latere angulo recto opposito (2° 40′ 25″) et angulo adjacente eodem ut supra, latus huic angulo oppositum (latitudo quaesita ♄) deprehenditur formula: sin. lat. ♄ = sin. 2° 40′ 25″ × sin. 50° 46′ 30″; lat. ♄ = 2° 4′ lat. ♃ = 53′. Differentia lat. = 1° 11′. In eodem triangulo latus tertium prodit formula:

tang. lat. tertii = tg. 2° 40′ 25″ × cos. 50° 46′ 30″ = tg. 1° 41′ 29″
Subtractis supra inventis 43′ 16″

Restat differentia long. ♄ et ♃ = 58′ 13″.

(12) p. 649. „Superatio" predit Keplero = 17⅙′, eandemque in calculo falsam ponit 17½. Priore utentes valore computamus in triangulo rectangulo rectilineo, cujus angulus alter acutus = 50° 30′, et latus recto oppositum = 17′ 40″, latus ad datum angulum

Quaesitum latus = 17⅙ × cosin. 50° 30′ = 10′ 55″.

Triangulum autem hoc construitur ducto per locum ☽ arcu parallelo horizonti ad verticalem, in quo tunc versatur ♃. Angulus quem hic arcus cum verticali constituit erit rectus, latus si oppositum: data distantia 17⅙′. Latus quaesitum arcus verticalis ejusdem, differentia altitudinum ♄ et ♃ diebus 3 protenta. Cum vero die 28. Dec. haec differentia inventa sit 1° 26′ 30″, eadem fuit die 25. = 1° 26′ 30″ — 10′ 55″ = 1° 15′ 35″.

(13) p. 650. E Keplori manuscriptis, in quibus plurimi insunt calculi ad hunc pertinentes librum, sequentia desumsimus, ut appareat, qua ratione progressus sit in calculando.

Observatio ♄, ♃ et ☿ d. 25. Dec. 1603.

Latera trianguli proportione numerorum 10, 13, 15. Si 13 dat 100000, quid 15 et 10? $\frac{100000}{13}$ = 76923, tangit 37° 34′; secans 126160.

$\frac{126160}{13}$, quid 13? 126160 : 13 = 16,4; ergo si 13 et 10 faciant rectum, minus est 16⅙.

Bene ergo, quod hic 15, ut sit ille minus recto. In alia figuratione sunt 14, 13, 10. Jam deprehensa dist. ♃ ♄ minor quam 1. 32. Si 10 dat 92, quid 13? 119,6. Ergo minus in prime schemate pro ♃ minus quam 1. 59′. Recte, quia dictum minus fuit observatum. Alterо schemate: si 10 dat 92, quid 14? — 128,8 [illegible] Cito igitur differentia afficitur 8′. Age vero, ex die 28. colligo, [illegible] 14 : 5, 10 dat 76, quid 13 et quid 14? R. 1. 38′ : 1. 46′. Sit [illegible] 1° 40′, et sint simul in horizonte. Igitur arcus sit in 9° 29′ [illegible] coelestis et horizontis 13. Ut ergo latus ad 1° 40′ sic 68200 ad [illegible] 24″, quanto spatio superat die 25. lat. ☿ lat. ♃, et sic 79165 ad 1° 34′ 10″, quanto spatio superat longitudo ☿ long. ♃. Sed quia ☿ altior, plus igitur superat [illegible] latitudine in longitudine. Ergo inter 25. et 24. Dec. fuit ☌ ♃ et ☿.

[illegible] sic confirmabimus. [illegible]

[illegible] et horizon secant [illegible] recte. Ergo ♄ erat a verticali exiguo [illegible] ab horizonte exiguo [illegible] potius tamen hic [illegible]

[illegible] 10, 14, 15. [illegible] ad 120 sec. 66,128 [illegible] 100000. [illegible] 75. 20.

[illegible] 40 [illegible] 40, 18.

Ecce plane. Conjunctio igitur fuit d. 24. post m. [illegible]
ergo d. 24. h. 7 fuit ☌ ♃ ☿. Et quia ☿ per 48′ anteri[illegible]
propinquior, d. 23, h. 8. circiter, si vera esset dist. ♃ [illegible]
altior hac linea.

Quid inde sequitur? Cupio scire, initio, cur ♃ [illegible]
oriatur? Oriatur cum 10° ♐; angulus ecliptica de [illegible]
42° 40′; lat. 4° 27′, tang. 7782; compl. [illegible]
(0,07782 . 1,08496 = 0,08443 = sin. 4° 36′ 5″) [illegible]
Oritur ergo 9° 5′; ang. 43° 7′, compl. 46° 53′ [illegible]
sin. 4° 46′ 2″) 4° 46′ 2″
4. 15. 38.
8. 1. 35. Cum hoc est orbis. [illegible]

Secundo quaeratur amplitudo obliqua. Tan. 4° 27′ [illegible]
$\left(\frac{0,07759}{0,68349} = 0,11358\right)$; basis 6° 21′ 5″ [illegible]
7. 22. (Distantia ♃ [illegible]
0. 51.

65349 × 51 = 34$^{00}/_{100}$; tanta latitudo [illegible]
72996 × 51 = 37$^{23}/_{100}$; tantum in long. [illegible]

Si jam altior fuit corde ♏, plus [illegible]
ipso horizonte plane transque jam existens, [illegible]
superationem supra inventam 1° 8′ pro[illegible]
Adde 1° 18′ 10″ ad long. ♃ 9° 39′, [illegible]

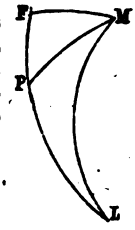
Fuit etiam d. 23. inter ☿ et spiam [illegible]
spica in 18° 19′ ♎, si ergo latitudo [illegible]
Sed ☿ est Jove septentrionalior, et [illegible]
latitudinem 4° [illegible] sec. 55° 53′ [illegible] = 472857 (qua [illegible]
(18° 19′ ♎ + 55° 18′) [illegible]
ponit ☿ [illegible]

Observatio [illegible]

Discrimen [illegible]
altior [illegible] 10° [illegible]
[illegible]
(ut 45° [illegible]

Linea per stellas [illegible]
[illegible]

[illegible] Ad constitutiones res non succederet, finem faciens addit: „hunc processum jam desiste. Saturnus et Ophiuchi caput sunt in eadem fere longitudine. Haec est causa crassi erroris." Ea quae sequuntur in manuscriptis, ad verbum fere finem sequentibus folii libri.



18) p. 658. Ratio calculi, qua in praemissis utitur Keplerus 5 exemplis eadem est, quam supra p. 652 sq. adhibuit. Triangulum assumit sphaericum, cujus latera sunt: differentia latitudinis Novae et planetae, distantia ejusdem ab illa et arcus eclipticae parallelus inter circulos latitudinis per Novam et singulos planetas ductos. Parallelum vero ultimo dictum aequalem assumit arcui ecliptiae inter illos circulos; et cum angulus, quem alter longitudinis circulus cum arcu constituit, sit rectus, quaerit, secundum ista, e duobus datis lateribus latus tertium. Sit v. c. p. 652 in triangulo FML

$FL = 7° 20'$, $ML = 34° 59'$, erit $\cos. FM = \frac{\cos. ML}{\cos. FL}$; $FM = 34° 18'$.

Deinde p. 658, Nro. I: $\cos. FL = \frac{\cos. 3° 24' 30''}{\cos. 1° 43'}$, $FL = 2° 56' 40''$

et inde long. Novae $= 280° 39' - 2° 56' 40 = 17° 38' 20''$ ♐.

Nro. II: $\cos. FL = \frac{\cos. 8° 27}{\cos. 3° 31'} = \cos. 7° 41' 18''$

Longit. Novae $= 265° 17' 30'' - 7° 41' 18'' = 17° 36' 12''$ ♐.

Nro. III: $\cos. FL = \frac{\cos. 6° 8'}{\cos. 30'} = \cos. 6° 7'$

Longit. Novae $= 251° 39' + 6° 7' = 17° 46'$ ♐.

Nro. IV: $\cos. FL = \frac{\cos. 19° 56'}{\cos. 5° 27'} = \cos. 19° 12' 12''$

Long. Novae $= 276° 54' 30'' - 19° 12' 12'' = 47° 42' 18''$.

(Locum Keplerii $19° 13' 30''$ erroneus est, cum sententiam tabulae ad secundam 105693 locum exhibeant $19° 12'$.)

Nro. V: $\cos. FL = \frac{\cos. 7° 32'}{\cos. 5° 22'} = \cos. 5° 17' 40''$

Longit. Novae $= 262° 27' 20'' + 5° 17' 40'' = 17° 45'$ ♐.

sive $\cos. FL = \frac{\cos. 7° 32'}{\cos. 5° 22'} = \cos. 5° 22'$

Longit. Novae $= 262° 27' 20'' + 5° 22' = 17° 49' 20''$.

[illegible] pertinent.

Nro. I. Observationes stellae novae 4. 17. Octobris.

inter Jovem et Novam 9. 23. 30.

Cum abundantia sextantis 4. 30.

Ergo [illegible]

[illegible] Jovis [illegible] Sol [illegible] 20

[illegible] Novae 1° 56' alto.

[illegible]

Hic prodit 7 minus justo. Quare retrograde [illegible] prodire. Retineatur autem 999415, utpote [illegible] quam proxime idem manet in tam parvis arcubus.

9987300000 (9987500000 — 99873 [illegible]
499365
798984
49936
9981267450
99624
9,5 ; 19 debet esse differentia.

Sit Jovis latitudo 12'.

88° 4.
88. 16. — 999542
87. 52. — 999607
225
117
999424

99870 = sin. 87°. 5', compl. 2° 55'
29. 34.
17. 39. ✗

Ergo hic latitudo Jovis esset [illegible]

Videantur observationes! Computat[illegible]

Sequente 12. Oct. [illegible]
die 13. [illegible]

Sit [illegible]

Si hanc divisionem lector comparaverit sequentibus, quae rem generaliorem faciunt, nil fuse amplius desideravit. Sit differentia divisoris et proxime majoris potentiae de 10 (hic 10^2) = a, verus erit divisor non 10^3 sed $10^3 - a$; quotiens sit q; jam subtrahendum est $(10^3 - a) \times q$, quare a.q addendum. Quotiens semper est primus numerus summae hac ratione conflatae.

His interpositis redimus ad Kepleri manuscripta.

Nro. II. Eodem (17. Oct.) inter Novam et Martem.

Fuit ♂ d. 21. vesperi, jam occasurus, in 28° 15½′ ♐, cum lat. austr. 1° 23½′, et forte fuit uno aut altero scrupulo ante, propter refractionem. Fuerit sane, verum die 21. Oct. tempus etiam posterius fuit. 28° 15′ 30″ ♐

2. 54.

ergo 17. Oct. 25. 21. 30.
Ob refract. 25. 20.
Ob horam 25. 18.

Latitudo sit 1° 35′ sine refractione.

Stellae latitudo 1. 56. bor. Distantia 8° 31′ 88° 4′

4. 39. 1. 35.

8. 26. 30. 89. 39. 99998

99917 — — compl. 81. 33. 30. 86. 29. 99812

93 186

99010 | 9 93

95 99905

855 (100000 — 99905 =) 95

90955 | 909

10

65 | 7 99097 — 82. 17. 50.

compl. 7. 42. 10.

25. 18. ♐

17. 36. ♐

Distantia igitur hac latitudine Martis et loco tali, qualis ex 21. Oct. et Maximo Magini quatridui integri, ♂ venit in 17° 39½′ ♐. Si distantiae sententia plurius minus, id ad votum; ut et a Jove et humore Sagittarii. Hic non sine [illegible] latitudo mutabitur Martis.

Nro. III. Eodem inter Novam et Saturnum.

Die 27. Sept. latitudo ♄ 1° 33½′ sept. in refractione.

Longitudo 10° 10½′ ♐

Distat: 20 17 38

die 17. Octobris: 11. 39½′ ♐

Saturnus latitudinem ♄ 1° 30′ sept. (latitudo minor, quia decrescit), distantia

6° 12′ vel 6° 14′

4. 39. 4. 39.

6. 7. 39. 6. 9. 30. — 99997

compl. 83. 52. 21. 83. 50. 30. 83. 54. — 99821

176

Ad Nro. [illegible]

99900|99341000000|99431
819 [illegible]
942290
819 [illegible]
431090
364 [illegible]
844540
273 [illegible]
149130
99431 = sin. 83° 53′
6. 7.
11. 39½.
17. 46½ ♐.

19) Ad diem 22. Oct. in manuscriptis hace tantum deprehendimus [illegible]
Tengnaglius notavit inter ♃ et Novam [illegible]
longitudo 21° 16′ ♐, latitudo
Novae 1° 56′ — 88° 4′ ♃ 4° 7′ 26″, comp. [illegible]
[illegible]
88. 15′ — 99952
87. 55 — 99934
18
9
99943
99789 — 86° 16′ 40″
3. 43. 20
21. 16 ♐
17. 32. 40 ♐. Nodus [illegible]

Memini, me hic solum observasse [illegible] alternis, quod non recte quadrat; fuit [illegible] ad alia necessaria omnia invenit. [illegible] adimenta (Stella [illegible] praecedit [illegible] Ephemeridi quidem [illegible] Regiomontani [illegible] non plane accuratus est, dum pro triangulo [illegible] cosinus Tychonicus generalis [illegible] quaesitum hoc dat:

cos. differentiae locorum [illegible]

log. cos. 11° 39′ = [illegible]
log. cos. 1° 56′ = [illegible]
log. 0.999256 = [illegible]

20) [illegible]
[illegible]
Rationem [illegible]
[illegible]

angulis pro eorum complementis, ita, ut sit $b = 29^\circ\ 21'\ 30''$, $c = 1^\circ\ 56'$, prior formula in hanc commutanda est

$$\cos.\ \alpha = \frac{\cos.\ a - \sin.\ b\ .\ \sin.\ c}{\cos.\ b\ .\ \cos.\ c}.$$

Cum autem sit: $\sin.\ b\ .\ \sin.\ c = {}^1/_2\ [\cos.\ (b - c) - \cos.\ (b + c)]$ et
$\cos.\ b\ .\ \cos.\ c = {}^1/_2\ [\cos.\ (b + c) + \cos.\ (b - c)]$, erit

$$\cos.\ \alpha = \frac{\cos.\ a - {}^1/_2\ [\cos.\ (b - c) - \cos.\ (b + c)]}{{}^1/_2\ [\cos.\ (b + c) + \cos.\ (b - c)]}$$

$$= \frac{\cos.\ a - {}^1/_2\ [\cos.\ (b - c) - \cos.\ (b + c)]}{\cos.\ (b - c) - {}^1/_2\ [\cos.\ (b - c) - \cos.\ (b + c)]}$$

$\cos.\ a$ (= sin. complementi a) = sin. $44^\circ\ 17' = 0{,}69821$
$b - c = 27^\circ\ 25'\ 30''$ compl. $(b - c) = 62^\circ\ 34'\ 30''$
$b + c = 31^\circ\ 17'\ 30''$ compl. $(b + c) = 58^\circ\ 42'\ 30''$
$\cos.\ (b - c) = 0{,}88761$ (K. 88790)
$\cos.\ (b + c) = 0{,}85453$ (K. 85425)
$0{,}03308$

${}^1/_2\ [\cos.\ (b - c) - \cos.\ (b + c)] = 0{,}01654$
$\cos.\ (b - c) - {}^1/_2\ [\cos.\ (b - c) - \cos.\ (b + c)] = 0{,}87107$

$$\text{ergo } \cos.\ \alpha = \frac{0{,}69821 - 0{,}01654}{0{,}87107} = \frac{0{,}68167}{0{,}87107} = 0{,}78256$$
(K. 78224)

$\angle\ a = 38^\circ\ 30'\ 14''$ ut supra.

Numeri Kepleri 88790 et 85425 falsi sunt, cum ille sit tantum $62^\circ\ 37'$ c., hic sinus $58^\circ\ 40'\ 48''$.

21) p. 666. Datis latitudinibus trianguli: $a = 14^\circ\ 53'$, $b = 88^\circ\ 4'$, $c = 94^\circ\ 27'$ (cum sit lat. Sinae $4^\circ\ 27'$ australis)

$$\text{prodit } \cos.\ \alpha = \frac{\cos.\ 14^\circ\ 53' - \cos.\ 88^\circ\ 4'\ .\ \cos.\ 94^\circ\ 27'}{\sin.\ 88^\circ\ 4'\ .\ \sin.\ 94^\circ\ 27'}.$$

Cum autem sit $\cos.\ 94^\circ\ 27'$ negativus, mutanda est formula in hanc

$$\cos.\ \alpha = \frac{\cos.\ 14^\circ\ 53' + \cos.\ 88^\circ\ 4'\ .\ \cos.\ 94^\circ\ 27'}{\sin.\ 88^\circ\ 4'\ .\ \sin.\ 94^\circ\ 27'}$$

Imo in Keplero quoque formula generalem est signum + pro — et hinc prodit

$$\alpha = 12^\circ\ 52'.$$

In Manuscriptorum Vol. III. Keplerus, eandem calculi rationem secutus, quamvis latitudine stellae Novae $= 1^\circ\ 55'$, deprehendit $\alpha = 12^\circ\ 27'\ 48''$, indeque stellae long. $[illegible]$, dividendo per Aquilam $= 17^\circ\ 42'\ \chi$, eorumque medium aestimatorum $[illegible]$. Discrepantia congruentiae utriusque observationis tantum, cum calculum adhibit: minuendo latitudinem, ut coincidant. Ipse sane fere in eadem linea, quod in hominum [illegible]. Sagittarium, utrumque Σ, et reponitur Novae his Σ observationibus in $17^\circ\ 42'\ \chi$.

[illegible]

$$\cos.\ \alpha = \frac{\cos.\ 1^\circ\ 57' \times \cos.\ 8^\circ\ 35'}{[illegible]}$$

$\cos.\ 1^\circ\ 57' = 0{,}9997424$
$\cos.\ 8^\circ\ 35' = 0{,}9901054$
$0{,}9898478 - 1$

$\cos.\ 14^\circ\ 18' = [illegible]$

[illegible]

$\cos.\ 25^\circ\ 4'$

[illegible]

Ad Nro. VIII.: cos. a = [illegible]

	8,5318281		9,9997484
	9,1040246		9,9964355
	0,6358527	= 3	0,9961839
cos. 7° 32′	= 0,99137		
	0,00432		
lg.	0,95705	= 0,9043892	
		0,9962139	
		9,9981253	= [illegible]

23) p. 662. In editione M. Hopperi (Bas. 1547) Arati [illegible] versionem horum versuum: Quales sibi capiti subjecerint, [illegible] etiam plena Luna conspicui essent. Sed minus non admodum [illegible] hinc inde exit splendor: attamen etiam hinc contemplabitur [illegible]

Eandem versionem exhibet editio Basileensis anni 1568, [illegible] se fert: „Arati Phaenomenon Fragmentum, Germanico Caesare [illegible] sermone versus illi translati sunt:

Hic Ophiuchus ubi longe colitur [illegible]
Et vastos humeros, tum tantum [illegible]
Illis fulgebat bonos humeros, [illegible]
Luna etiam, mensem cum plena [illegible]
Lux tenuis manibus, per quas [illegible]
Pressus utraque manu medium [illegible]

24) p. 663. Gerhardus Mercator, [illegible] tantum Chronologia sua celebet, sed etiam confecerit [illegible] confecit c. m. sec. XVI. [illegible] globos [illegible] nomiam pertinent, instrumenta, [illegible] Weidleri hist. astr.)

De globo suo [illegible] Jac. Florentini civis Amstelodamensis, [illegible] globum Braheum secum Pragam [illegible]

Jo. Bayerus inclytus [illegible] Augustanus, praeter jurisprudentiam [illegible] Urbis [illegible] ad novam stellam [illegible]

26) p. 665. [illegible] Jo. Jovianus Pontanus [illegible] De Meteoris. Bas. 1545. [illegible]

56° 40′) [illegible]. Denique Kepleri parall. long. ad 0° ♐ = 30′ 53″ prodire debuit falsa, cum ad eam inveniendam falsam 31′ 35″ adhibuerit.

Tabulae Magini, quibus utitur Keplerus, prodierunt Venetiis 1604. inscriptae: „Tabulae primi mobilis, quas Directionum vulgo dicunt. Ad Aug. Imp. Rudolphum II.“

28) p. 671. Vir, quem hic Keplerus tanta notavit ignominia, est Antonius Laurentius Politianus, cujus libellum de Stella Nova Herwartus Keplero miserat. (Comp. Opticam p. 95. Titulum libri diximus supra, ann. 3.) Ipse Keplerus Brenggero quaerenti indicat viri nomen in literis ad Br. datis, quas in praefatione exhibuimus (v. pag. 591); in „Hyperaspiste“ Tychonis nominat eum Ant. Fabritium Montepolitanum, addens: pueriliter hallucinatum ego pro meritis suis accepi.

Idem Laurentius edidit anno 1606. Parisiis alterum quem Keplerus dicit librum, inscriptum: De Numero, Ordine et Motu Coelorum, adversus recentiores. Hunc librum „in gratiam patroni“ taxat Keplerus pluribus. Deprehendimus in manuscriptorum Petropolitanorum Vol. V. fragmentum literarum, quod haud ab re putavimus hic inserere. Quis „patronus“ ille fuerit, non constat. Inscriptum est fragmentum:

Animadversiones Kepleri in librum Laurentii Politiani.

Insidiatur hominum commodis malus quidam genius, conturbans ea, quae dilucidant docti, ibi maxime nocens, ubi assidui maxime homines.

Finis investigatoribus est propositus humani generis eruditio et disciplina in rebus abstrusis: hunc finem ut impediat maleficus ille, solet philosophis paucis interfundere simiarum ingentes greges, quorum quisque propriam opinionem de re eadem excitet et propugnet, ut opinionum varietate obruti homines in incerto maneant tandemque omnia vocent in dubium. Vulgus quippe non rationibus movetur, sed auctoritatibus, penes quem facile est unam veram opinionem decem falsis oppositis incertam reddere. Nec legunt philosophos ut rationum monstratores, sed ut magistros exceptione majores, si vel nullas rationes afferant dogmatum, vel si pugnent inter se, utrosque aeque explodunt et derident. Sufficit ut credant, vanum esse dogmatistam, si constet, contrarium affirmari a recentiori aliquo. Qui sunt ergo veritatis amantes, debent operam dare, ut fucosas hujusmodi philosophias opprimant, inculcatis iis, quae certissima sunt; quod in recentissimo auctore Ant. Laur. Politiano in praesens mihi sumsi praestandum.

Capite I. Veteres, ait, fuisse contentos 8 coelis, recentiores addidisse nonum et decimum &c. Mala fide. Qui 8 numerarunt, eorum animus fuit inire numerum [illegible] corporum, quae moverentur in coelo suis quodque motibus; inventa igitur Sol, Luna, quinque planetae, et convexum illud stellis undique consitum. Qui vero [illegible] investigarunt horum motuum, non contenti fuerunt 8 orbibus, non sane [illegible]. Falsum igitur dixit Laurentius. Igitur hodierni eodem jure [illegible] nonam et decimam sphaeram, quo jure Aristoteles introduxit orbes 55.

Cap. II. Apparet ad oculum, coelo stellato ejusque conspicuo aliquo signo [illegible] quod invenitur planeta aliquis) per diei spatium revoluto ad eandem [illegible], quam ei quis in Terra ponit, planetam ut plurimum [illegible] [illegible] velocius redire [illegible] [illegible], [illegible] [illegible], hic [illegible] [illegible], sic ut [illegible] [illegible] revolvantur; quilibet quidem in [illegible] 8 [illegible] [illegible] relinquitur a [illegible], Luna plurimum [illegible], quod [illegible] [illegible], [illegible] [illegible] sit, Saturnus velocitate [illegible] par. [illegible] [illegible] planeta quilibet a [illegible] [illegible] [illegible], [illegible] [illegible] unquam revolutionem [illegible] [illegible]

[illegible]

[illegible]tatio, dividuntur sententiae astronomorum [illegible] aiunt ire ab ortu in occasum et rapere planetas [illegible] propriis motibus ire in contrarium; reliqui dicunt [illegible] planetas omnes à diurno motu esse [illegible] converti ab occasu in ortum, [illegible] perturbatione ullâ perficientibus.

Quid hic Laurentius? Utrosque ait dixisse [illegible] motuum sic esse comparatum, uti nos illum [illegible] simus. O stultam philosophiam! Ut [illegible] ejiciat, perturbationem pristinam introducit! [illegible] Laurentius? An non eadem, [illegible] Aristotele, easdem opiniones redire [illegible] annus Platonicus a delirio Patricii, nullus [illegible] nulla generis humani intercedo, quae Patricio [illegible] tius haberet quod instauraret, sed nec longe [illegible] Italus Itali coaetaneus adhuc calentia [illegible] novum quid dicere somniat.

Itaque lectores ne perturbentur, [illegible] testatur, falsum dixisse Laurentium, [illegible] tentem et rhonchos ducentem, nihil [illegible] necessarium esse, ut alterutra sententiarum [illegible] Terra stante coelum fixarum volvitur diurno [illegible] secum planetas reluctantes et [illegible] planetis libere currentibus et revolutione [illegible] Terra volvitur ab occasu in ortum [illegible] Aut si hoc est, quod Laurentius dixit: [illegible] opinionem, doceat ex ea praedicere motus [illegible] si tentaverit, seposito opinionum quae [illegible]

Jam quae objicis primae sententiae [illegible] omnes tamen astronomorum [illegible] agrometrorum ab varia [illegible] [illegible] ut videant dissentiens [illegible] adeo lubricis nisi rationibus [illegible]

1) Ait coelos esse laeves [illegible] vehi dicatur. Ergo planum [illegible] Aliquomodo [illegible] tandem quod [illegible] [illegible]

2) [illegible]

Itaque duo responderi possunt: aut enim absurdum nullum est aut absurditas [illegible] Aristotele sublata est. Nullum, inquam, absurdum, si concentrici ponantur [illegible] Theoricis libellis, qui theoriam planetae supra et infra elattitant. [illegible] quamque concentrici movantur aequabili motu. Igitur theoria planetae inferioris et vectatur a superiore includente et ipsa suo movendi principio addit aliquid huic vectationis motui, quo fit velocior vehente. Itaque si nihil est absurdi, vehi concentricum a deferentibus in una aliqua theoria et interim moveri per deferentium circulum proprio motus principio, nihil etiam absurdi, vehi integras theoricas inferiores a superioribus, interimque ut formicam in circumacta rota in eadem puncta aliquid proprium utitur celeritatem vectationis.

Quicquid vero absurdi hinc, ob diversitatem fortè polorum, exstrueret aliquis, Aristoteles ita sustulit, ut Eudoxi et Calippi orbibus 27 interponeret alios 26, quos restituentes appellat, quorum unicuique tribuitur eadem plane motus celeritas et qualitas (in plagam tamen contrariam), quae inest superiori Calippico se proxime tangenti et vehenti. Fit ita hujus revolventis ope, ut quemcunque motum perfiat e. g. ♄ et ♃ proxime sequens restituentem, plane liberetur et quasi exuatur a contrario motu restituentis, qui vectationis lege Jovi communicatur: itaque nisi ♃ ex se ipso novum motum produceret, in hac vectationum obviatione plane videretur quiescere. Habes Laurentine absurdi tui elisionem non novitiam, sed plane, contra quam opinabaris, antiquissimam.

Exhausta pharetra, perfusis telis, quibus usitatam hypothesin configeret, inepti eandem Laurentius defendere et vulnera obligare. Magnus novator eadem undique dicit cum veteribus, mutatis tantum mediis. Fatetur, motum primae sphaerae communicari inferioribus, at negat, id fieri vectatione vel raptu, qui oriatur ex obliquitate sphaerarum, sed communicatione quadam ejusdem consilii: intelligentias namque sphaerarum inferiorum ad primam respicere, eumque eundem cum illa finem habeant propositum, imitari etiam ipsius motum. At quia non sufficiat hic motus inferioribus, addere aliam proprium.

Vehitur igitur, Laurenti, non quidem corpus a corpore, sed vehitur seu magis vehitur intelligentia ab intelligentia, cogitatio a cogitatione, cupiditas a cupiditate, vis materia a vi materia? Quid? Tuae solus sapis? An non vel haec eandem sententiam [illegible] etiam instrumenti per suos orbes depingunt: an in fortasse sensum [illegible] verterum capere potuisti, non imaginatus prius orbium vectationem cum [illegible] philosophum rei per se obscurae? Numeratoribus enim et calculatoribus [illegible] quae est, frustra in illis amores summi boni, cupiditates [illegible], intelligentias et hujusmodi philosophias inculcaverit: quae nisi rebus [illegible] explicentur, ad nihilum hoc veniunt. Ista vero difficilior est ratio, [illegible] intelligentiae ♃ [illegible] motus [illegible] [illegible] Violentia [illegible] a [illegible] ad violentia [illegible] Thurium [illegible] Averroi hic [illegible] animal; quae facto nulla restat [illegible] nulla igitur violentia [illegible] quantitate [illegible]

tantum ait hic intelligentiam intra assisteret
sit parte orbis? Si extra stellam, absurdum;
nobilissima; si in stella, orbis igitur a stella
ut membra a corde: atqui primi orbium
quibus orbes instrumenta sunt, tibi onera.

29) p. 671. Versus hic, desumtus ex
plaudes, tum in libris typis expressis tum
hendimus. Sic in praefatione ad Astron.
secrato cujusdam studiosi Tubingensis, Wernher

„Haud sentit bene, qui disserit
Keplerus: Tubingae anno 1621. postridie

In alio (Felicis Limmermann Bibliothecae

Frugalitatis nulla
Si dives ipse, simul
O corda dura, o quanta

J. K.

In tertio: Prodigit ars nummos,

O curas hominum

Haec

Nobili, Generoso et literatissimo J
obsequii debiti causa scripsi haec

30) p. 673.
de opere absoluto,
scripserit: „in theoria
anno 1609.
ante tum temporis
Maculae enim Solares
decanta 1610.
hypothesibus,

Pro

2) Intelligentia

vit; non multum enim dissimilis erat Neapolitanae. Flandricam depictam videbis in Opticis sub persona Jessenii, addita mea explicatione, quem locum ipsi cum gratiarum actione monstrabis.... Stanislaus ait, visum limbum Solis 1½ dig. juxtaque limbum Lunae albicantem ⅓ dig. et reliquum corpus fuscum. At quia nulla causa est, cur limbus ille Lunae (a Sole aversus et ad nos una cum toto reliquo fusco hemisphaerio conversus) albicaverit prae reliquo hemisphaerio, dicendum itaque, albedinem illam nihil aliud fuisse, quam dilatationem arcus Solaris, impressam tunicae visoriae, confusam cum specie corporis Lunae. (Opt. V, 5.) Nam spectator converso exortu retiformis, quo solo fit directa visio, ad sectionem Lunae et Solis, non potest prohibere quin et Solis cornu, quod lateribus retinae excipi debebat, ipsum etiam exortum retinae, qui ad aliud videndum dirigitur, irradiet. Quae irradiatio Solis indirecta et lateralis, cum sit fortior radiatione Lunae directa, visioni directae suam radiationem albicantem communicat. (Vide exemplum Opt. V, 5.) Ita subit animum, an haec eadem sit passus Clavius anno 1567. a clarore substantiae aethereae circa Lunam fusae, quae Stanislaus a cornu Solis. Confirmat Stanislaus mirifice demonstrationem Opt. V, 3. prop. 28. Cum enim aër non sit unius milliaris altitudinis, impossibile fuit, ut is aër, qui Hispaniae superfusus est, visus sit in Flandria, quod fuisset necessarium, si pars splendoris Solis infra Lunam, pars circuli ad austrum haesisset in hoc humili aëre. At esto sane, ut aliquot Terrae diametros aequet aër noster, tamen si non ipsam Lunam attingit, hiatus tenebrosus multo videbitur amplior corpore Lunae (posita Luna majore quam Sole). Concludo ergo, substantiam aetheream, in qua Luna, crassiorem esse interdum ut anno 1605. — Adductis dein iisdem exemplis, quae in textu, concludit: Tota hac cum supellectile ad Aristotelem te confer et delibera, an aetherea substantia patiatur alterationem. (Ex ep. 14. Feb. 1606. Pragae data.)

34) p. 699. Vir, quem dicit Keplerus gravem et literatissimum, fuit J. G. Herwartus, cujus relationem supra (p. 84) proposuimus.

De eclipsi ☉ anni 1605. Keplerus monuit astronomos peculiari libello, quem astronomis et aliis quoquoversus transmisit, petitionem adjungens, ut observationes suas ipsi communicent. Quo motus medicus quidam J. G. Göpel ea, quae inter vehendum „ex rheda [illegible] [illegible], quas Plinio Mattiacas dictas putant" observaverat, Keplero transmittenda [illegible] [illegible], presb. Soc. Jesu, Moguntiam scripsit. In his literis deprehendimus „aliquem," quem dicit Keplerus, qui, referente Goebelio „ipsi oppositus sedebat in [illegible] [illegible], et [illegible], Solem sibi non [illegible] apparere, sed orbem puniceum infra Solem. [illegible] [illegible] se observasse ajebat." In iisdem literis occurrit [illegible] [illegible] [illegible]: „narrabat mihi senior quidam Canonicus Confluentinus, anno 1560, [illegible] [illegible] Archiepiscopus ex more collocabatur supra altare, defecisse Solem, [illegible] Treviris ex utraque parte [illegible] [illegible] se [illegible] [illegible] apparuisse [illegible] plenam.

35) p. 701. [illegible]

existente nexam esse [illegible]. Secreta est [illegible] cuiae a membranis ipsum [illegible], subtendentes [illegible] tribuis de nutrimento crystallini opinionem, inventi [illegible] liene. Negas nutriri vapore crystallinum, ergo, [illegible] omnes partes nutriri vaporibus, priusquam [illegible] tialem convertitur, ut poros perhaere possit, [illegible] non quaquaversum pervadunt. Id maxime in [illegible] intertextus esset, perspicuum non esset.

Responsio Brenggeri haec est: Substantia, [illegible] alimento scilicet in habitus converso, ut ita quae [illegible] vasa non quaquaversum pertingant, tamen earum [illegible] ut possint et sufficiant quaquaversum sanguinem [illegible] particulis indidit facultatem attractricem, et quae [illegible] jam assecutus est, quemque roris nomine appellat [illegible] per modum consequentiae seu continuationis et [illegible] stae, agglutinatus et assimilatus in substantiam [illegible] eorum est sententia, a qua cur recedamus nulla [illegible] nessa, meus quondam in medicina praeceptor Wilhelm [illegible] resolutione anno 1589. disputavit: sed illud latius [illegible] (Ex epistola d. nonis Martii 1608).

De cibi vaporibus, respondit Keplerus [illegible] Praeterea mediocrum communem sententiam [illegible] milior. Si enim partes trahunt rorem, vagor [illegible] Si ros trahitur, colatur per solidam carnem [illegible] adjuvari illam ex parte materiae, ut non [illegible]

E literis Brenggeri, eorum quae [illegible] haec [illegible] per vapores, eo quod rorem sanguinis [illegible] atque naturam ita fatigari. Sed nolim [illegible] partes carnosas discernit in [illegible] alimentalis non per transversum, sed [illegible] et non [illegible] [illegible] Dubito [illegible] [illegible] tricem, cui secundum [illegible] [illegible]

[illegible] est hoc, quod dicit Keplerus ipsum Cardinalis [illegible] astronomiae cum theologia, consonantia, astronomiae cum [illegible] Edidit primum [illegible] cum theologia [illegible] feliciter [illegible] mira imprimendi arte [illegible] Vindelicorum [illegible] 4. Nonas Jul. [illegible] de concord. astr. cum theol. anno 1414 „in civitate Constantiensi [illegible] in civitate [illegible] 1414. mensis Maji die decima.“ [illegible] per totum hunc librum et [illegible] astrologicam [illegible] ecclesiasticas. „Revolutiones Saturni [illegible] magnos [illegible] effectus in civitates et ecclesiam [illegible] Cardinalis, et recensitis 22 „scismatibus ecclesiae“ [illegible] quod pejus est et magis [illegible] decretum, hoc anno sacrum [illegible] in civitate Constantiensi, ubi rex Romanorum et Ungariae rex [illegible] (De his, quae [illegible] Constanciis agebantur et quantum ipse [illegible] legantur historici.) Keplerum accurate [illegible] hunc librum et quae ipsi placebant passim eumque in usum vertisse, quamquam [illegible] scriptum deprehendimus.

49) p. [illegible] Georgius Eichlerus ([illegible]) qui anno 1607 Calendarium et [illegible] de cometa conscripsit, quaedam Kepleri dicta e libro de Stella nova [illegible] Keplerus haec ei dedit:

[illegible] a te factam mihi injuriam. Nam et mihi tribuis, quae mea non sunt, et quae mea sunt, antiquitati adscribis. Egone scripsi cometas sub Lunam detrudendos et mutationi subjiciendos? Rogo paginam libri de Stella. Nam pag. 23. fol. 115 (695) habes contrariam meam sententiam: cometas [illegible] per [illegible] sphaeras, et eundem cometam posse ex aethere per Lunae sphaeram [illegible] in aetherem ferri. Itaque proxima occasione exspecto a te, ut [illegible] quae mihi tribuis, esse mea.

[illegible] antiquitati, mea sunt, desumta ex p. 139 (732) libri [illegible]

beflissene Dienste bevor. E. G. [illegible]
H. Henckels mit [illegible] Freyden [illegible]
von diesem newen [illegible] soll [illegible]
möglich. Weil dan ich vor 6 [illegible]
ich es dieser Tage [illegible]
ich gleich ernst begehrter Antwort [illegible]
und zu sein glücklichen newen Jahr [illegible]
Betreffend H. Rabini Bedenckhen [illegible]
philosophia mit theral [illegible] Stich [illegible]
seine Zung und Feder [illegible]
Pfennet [illegible] [illegible] will dah bey [illegible]
[illegible] Stern [illegible]
[illegible] erwecken [illegible]
[illegible] Mensch sein [illegible]
und das zu verwundern ist, auch [illegible]
sage. Wie nun ich demselbigen [illegible]
Gott mich keiner anderer Lehrmeister [illegible]
Vernunft und natürlicher [illegible]
und andern die Kunst, künftige Dinge [illegible]
sie reden vil aus Eingebung Gottes [illegible]
pflegen, hab ich zum grossen Tadel [illegible]
grossen Nagel am Daumen [illegible]
Ich kennet [illegible] [illegible]
[illegible] Tages [illegible]
[illegible] er [illegible] als [illegible]
[illegible] Physica? [illegible]
bis 1558, nemlich an [illegible]
[illegible] 1558 [illegible]

[illegible]

sonder freyen [illegible]
soyll [illegible]
[illegible]
prognostica [illegible]
Antwort [illegible]

[illegible]

bey [illegible]
dem [illegible]
erwecke wider die [illegible]
Mensch zeih, der [illegible]

[illegible]

Dinge [illegible]
Gott [illegible]
Theil [illegible]

[illegible]

Astrologo-physico [illegible]
1556, nemlich an b[illegible]

[illegible]

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